
**Coniferous sawn timber — Sizes —
Permissible deviations and shrinkage**

Bois sciés résineux — Dimensions — Écartes admissibles et retrait

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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. 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. www.iso.org/patents

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 218, *Timber*.

This second edition cancels and replaces the first edition (ISO 738:1981), which has been technically revised.

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Coniferous sawn timber — Sizes — Permissible deviations and shrinkage

1 Scope

This International Standard specifies permissible deviations, due to inaccuracies in sawing, from nominal thicknesses, widths and lengths, for coniferous sawn timber.

It also gives, for information, average values for shrinkage for some wood species.

It is applicable to unplanned square-edged and unedged coniferous sawn timber having thicknesses or widths in the range 10 mm to 310 mm.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 24294, *Timber — Round and sawn timber — Vocabulary*

3 Terms and definitions (standards.iteh.ai)

For the purposes of this document, the terms and definitions given in ISO 24294 apply.

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4 Permissible deviations and shrinkage

The nominal sizes of coniferous sawn timber are established at an absolute moisture content of 20 %.

NOTE The absolute moisture content is the moisture content related to the oven-dry mass of the timber, expressed as a percentage.

The actual thickness and width of sawn timber having moisture contents greater than 20 % may be larger than, and those of sawn timber having moisture contents less than 20 % may be smaller than, the nominal sizes, by the corresponding value for shrinkage.

Average values for shrinkage are given, for information, in [Annexes A](#) and [B](#).

The actual thicknesses of all kinds of coniferous sawn timber, and the widths of square-edged sawn timber with parallel edges, in any cross-section of each piece of sawn timber, may deviate, due to inaccuracy in sawing, from the nominal sizes corrected for shrinkage by not more than

- a) for thicknesses and widths in the range up to and including 30 mm to 105 mm: ± 2 mm;
- b) for thicknesses and widths greater than 105 mm: ± 3 mm.

If 20 pieces of the same size are taken at random from a lot of sawn timber, the average actual thickness (irrespective of the kind of sawn timber) and the average actual width of square edged sawn timber with parallel edges shall not be less than the nominal sizes, corrected for shrinkage.

The permissible deviations of actual lengths of sawn timber from the nominal length, due to inaccuracy in sawing, shall be +50 mm, and -25 mm.

Annex A (informative)

Average values for shrinkage for coniferous sawn timber (pine, spruce, fir and other species)¹⁾ having an average density of 0,35 g to 0,6 g/ cm³ in the absolutely dry condition

Table A.1

Thickness and/or width of sawn timber	Absolute moisture content of sawn timber, %							
	range	over 38	34 to 38	31 to 33	26 to 30	23 to 25	18 to 22	15 to 17
	mean	—	36	32	28	24	20	16
mm		Average shrinkage, %						
from 10 to 17		+4,0	+3,2	+2,4	+1,6	+0,8	±0	-0,8
from 18 to 29		+3,4	+2,7	+2,0	+1,4	+0,7	±0	-0,7
from 30 to 90		+3,2	+2,6	+1,9	+1,3	+0,6	±0	-0,6
from 91 to 140		+2,9	+2,3	+1,7	+1,2	+0,6	±0	-0,6
from 141 to 170		+2,7	+2,2	+1,6	+1,1	+0,5	±0	-0,5
from 171 to 210		+2,6	+2,1	+1,6	+1,0	+0,5	±0	-0,5
from 211 to 255		+2,6	+2,1	+1,6	+1,0	+0,5	±0	-0,5
from 256 to 310		+2,5	+2,0	+1,5	+1,0	+0,5	±0	-0,5

NOTE The values in the table are given as reference data.

1) The botanical names of the wood species are the following: pine: Pinus; spruce: Picea; fir: Abies.

Annex B (informative)

Average values for shrinkage for coniferous sawn timber (larch²⁾ and other species) having an average density of 0,61 g to 0,75 g/ cm³ in the absolutely dry condition

Table B.1

Thickness and/or width of sawn timber	Absolute moisture content of sawn timber, %							
	range	over 38	34 to 38	31 to 33	26 to 30	23 to 25	18 to 22	15 to 17
	mean	—	36	32	28	24	20	16
mm	Average shrinkage, %							
from 10 to 17		+5,2	+4,2	+3,1	+2,1	+1,0	±0	-1,0
from 18 to 29		+4,4	+3,5	+2,6	+1,8	+0,9	±0	-0,9
from 30 to 90		+4,1	+3,3	+2,5	+1,6	+0,8	±0	-0,8
from 91 to 140		+3,8	+3,0	+2,3	+1,5	+0,8	±0	-0,8
from 141 to 170		+3,5	+2,8	+2,1	+1,4	+0,7	±0	-0,7
from 171 to 210		+3,4	+2,7	+2,0	+1,4	+0,7	±0	-0,7
from 211 to 255		+3,3	+2,6	+2,0	+1,3	+0,7	±0	-0,7
from 256 to 310		+3,2	+2,6	+1,9	+1,3	+0,6	±0	-0,6

NOTE The values in the table are given as reference data.

2) The botanical name of larch is Larix.

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