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Woodworking machines — Safety —

Part 16: Table band saws and band re-saws

Machines à bois — Sécurité —

Partie 16: Scies à table et scies à refendre

ICS: ISO ics

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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).

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).

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 voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 39, *Machine tools*, Subcommittee SC 4 *Woodworking machines*.

This document is intended to be used in conjunction with ISO 19085-1:2017, which gives requirements common to different machine types.

A list of all parts in the ISO 19085 series can be found on the ISO website.

CEN: This document supersedes EN 1807-1:2013.

Introduction

The ISO 19085 series of International Standards provides technical safety requirements for the design and construction of woodworking machinery. It concerns designers, manufacturers, suppliers and importers of the machines specified in the Scope. It also includes a list of informative items that the manufacturer will need to give to the user.

This document is a type-C standard as stated in ISO 12100.

The machinery concerned and the extent to which hazards, hazardous situations or hazardous events are covered are indicated in the Scope of this document.

When requirements of this type-C standard are different from those which are stated in type-A or type-B standards, the requirements of this type-C standard take precedence over the requirements of the other standards for machines that have been designed and built according to the requirements of this type-C standard.

The full set of requirements for a particular type of woodworking machine are those given in the part of ISO 19085 applicable to that type, together with the relevant requirements from ISO 19085-1:2017, to the extent specified in the Scope of the applicable part of ISO 19085.

As far as possible, in parts of ISO 19085 other than ISO 19085-1:2017, safety requirements are referenced to the relevant sections of ISO 19085-1:2017, to avoid repetition and reduce their length. The other parts contain replacements and additions to the common requirements given in ISO 19085-1:2017.

Thus, Clauses 5, 6, 7 and 8, with their subclauses and the annexes of this part, can either

- confirm as a whole,
- confirm with additions,
- exclude in total, or
- replace with specific text,

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the corresponding subclauses or annexes of ISO 19085-1:2017.

This interrelation is indicated in the first paragraph of each subclause or annex right after the title by one of the following statements:

- “This subclause of ISO 19085-1:2017 applies.”;
- “This subclause of ISO 19085-1:2017 applies with the following additions.”, or “This subclause of ISO 19085-1:2017 applies with the following additions, subdivided into further specific subclauses.”;
- “This subclause of ISO 19085-1:2017 does not apply.”;
- “This subclause of ISO 19085-1:2017 is replaced by the following text.”, or “This subclause of ISO 19085-1:2017 is replaced by the following text, subdivided into further specific subclauses.”.

Specific subclauses and annexes in this part of ISO 19085 without correspondent in ISO 19085-1:2017 are indicated by the introductory sentence: “Subclause (or annex) specific to this part of ISO 19085.”

Clauses 1, 2, and 4 replace the correspondent clauses of ISO 19085-1:2017, with no need for indication since they are specific to each part of the series.

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1 Scope

This document gives the safety requirements and measures for stationary and displaceable table band saws and band resaws with manual loading and/or unloading, designed to cut wood and materials with similar physical characteristics to wood, hereinafter referred to as “machines”.

NOTE 1 For the definition of displaceable machine, see ISO 19085-1:2017, 3.5.

It deals with all significant hazards, hazardous situations and events as listed in Clause 4, relevant to the machines, when operated, adjusted and maintained as intended and under the conditions foreseen by the manufacturer including reasonably foreseeable misuse. Also, transport, assembly, dismantling, disabling and scrapping phases have been taken into account.

NOTE 2 For relevant but not significant hazards, e.g. sharp edges of the machine frame, see ISO 12100:2010.

It is also applicable to machines fitted with one or more of the following devices/additional working units, whose hazards have been dealt with:

- a) device to tilt the table;
- b) device to tilt the saw unit.

This document does not apply to:

- 1) machines driven by combustion engines or power take offs (PTO);
- 2) log band sawing machines;

NOTE 3 Log band sawing machines are covered by EN 1807-2.
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- 3) machines designed for cross-cutting round or irregular shaped work-pieces;
- 4) transportable / displaceable machines with a maximum length of the band saw blade of ≤ 2700 mm and a maximum diameter of the powered wheel of ≤ 350 mm;

NOTE 4 Transportable electrically driven machines are covered by the requirements of EN 61029-1:2009 together with EN 61029-2-5:2015.

This document does not deal with hazards related to the combination of a single machine being used with any other machine (as part of a line).

This document is not applicable to machines intended for use in potentially explosive atmospheres or to machines manufactured prior to the date of its publication.

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 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction*

ISO 13849-1:2015, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design*

ISO 13857:2008, *Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs*

ISO 19085-1:2017, *Woodworking machines — Safety — Common requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12100:2010, ISO 13849 1:2015, ISO 19085 1:2017 and the following apply.

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

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

3.1

band sawing machine

sawing machine with one saw blade in the form of a continuous band mounted on and running between two or more band wheels

3.2

table band saw

hand-fed *band sawing machine* (3.1) with a fixed or tilting table or a tilting saw unit

Note 1 to entry: See Figures 1, 3 and 4.

3.3

band resaw

band sawing machine (3.1) with integrated feed of the work-piece used for secondary conversion of solid wood

Note 1 to entry: See Figure 2.

Note 2 to entry: Band resaws can be in vertical, tilted and horizontal orientation.

3.4

band saw blade straining

force exerted on the band saw blade to keep it in position on the band wheels during cutting

Note 1 to entry: See Figure 6.

3.5

band saw blade tensioning

process used to form the cross-section of the band saw blade, either by rolling or hammering, in order to ensure that the front and back edges of the band saw blade grip the band wheels

3.6

band saw blade tracking

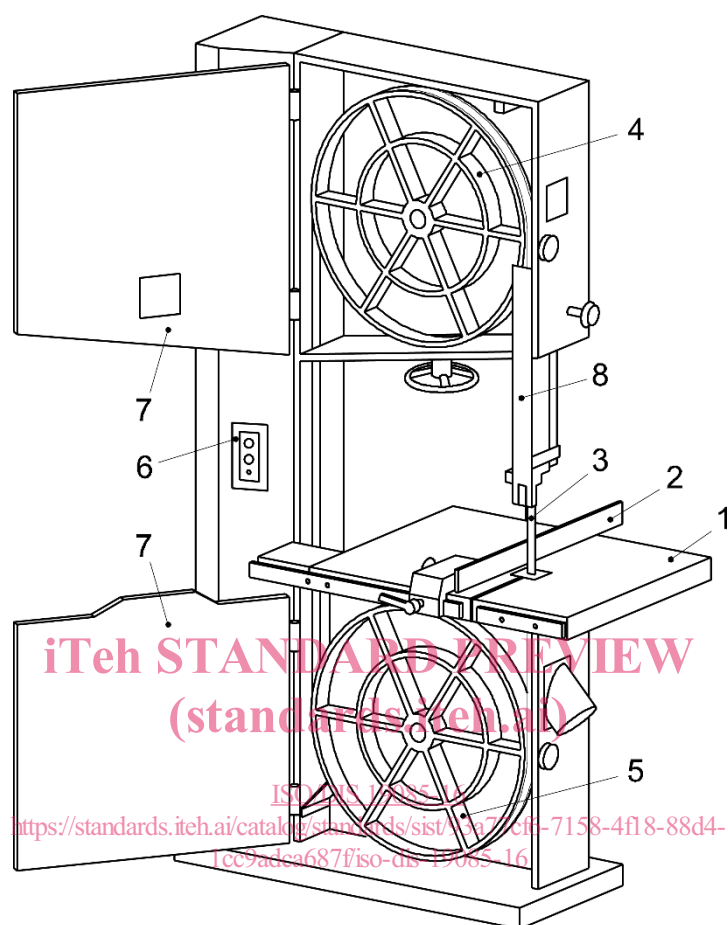
means used to maintain the position of the band saw blade on the band wheels

Note 1 to entry: See Figure 5.

3.7

tracking mode

mode to allow tracking adjustment during un-braked run-down of the tool spindle, e.g. by adjustment of the inclination of one of the band wheels



Key

- | | | | |
|---|------------------|---|---|
| 1 | table | 5 | bottom band wheel |
| 2 | adjustable fence | 6 | start and stop controls |
| 3 | band saw blade | 7 | guards for the band saw blade wheels |
| 4 | top band wheel | 8 | adjustable guard for the band saw blade |

Figure 1 — Parts of a table band saw (machine opened, e.g. for tool change)



Key

- | | | | |
|---|----------------------------|---|---|
| 1 | feed roller | 5 | guards for the band saw blade wheels |
| 2 | work-piece support (table) | 6 | adjustable guard for the band saw blade |
| 3 | infeed table roller | 7 | start and stop controls |
| 4 | guard below the table | | |

Figure 2 — Example of a band resaw

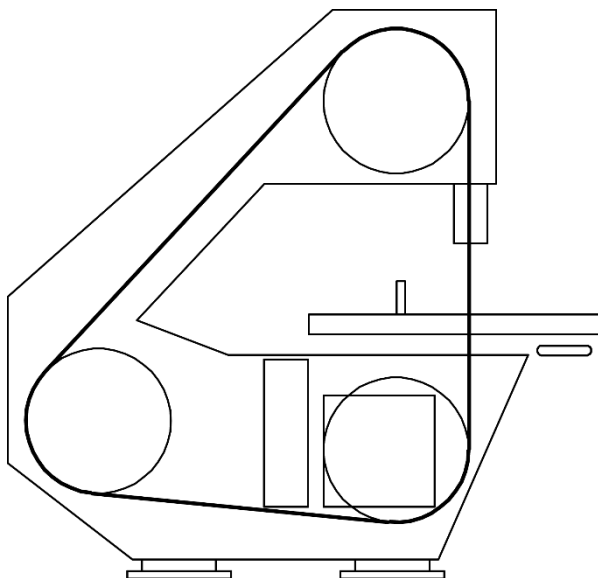


Figure 3 — Table band saw with three band wheels

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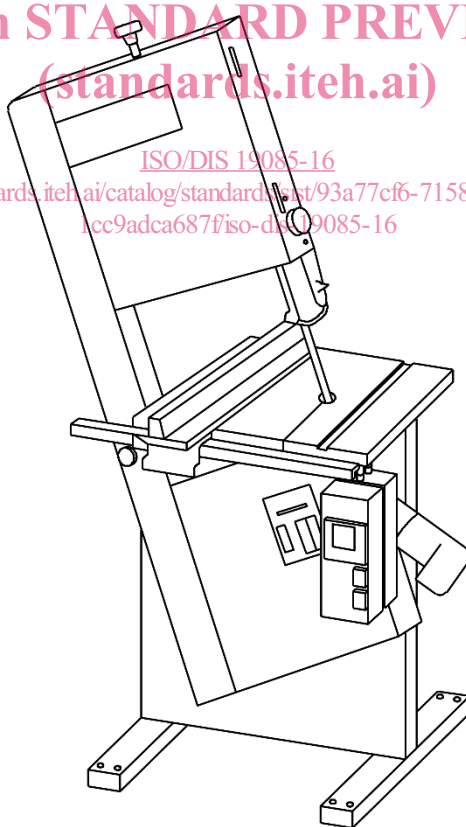


Figure 4 — Table band saw with tilting saw unit