



SLOVENSKI STANDARD
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Lesnoobdelovalni stroji - Varnostne zahteve - 17. del: Stroji za lepljenje robnih trakov z verižnim dodajanjem (ISO/DIS 19085-17:2019)

Woodworking machines - Safety requirements - Part 17: Edge-banding machines fed by chains (ISO/DIS 19085-17:2019)

Holzbearbeitungsmaschinen - Sicherheit - Teil 17: Kantenanleimmaschinen mit Kettenbandvorschub (ISO/DIS 19085-17:2019)

Machines à bois - Sécurité - Partie 17: Machines à plaquer sur chant à alimentation par chaîne(s) (ISO/DIS 19085-17:2019)

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79.120.10	Lesnoobdelovalni stroji	Woodworking machines

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Woodworking machines — Safety —

Part 17: Edge banding machines fed by chains

*Machines à bois — Sécurité —**Partie 17: Machines à plaquer sur chant à alimentation par chaîne(s)*

ICS: 79.120.10

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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. (standards.iteh.ai)

This document was prepared by Technical Committee ISO/TC 39, *Machine tools*, Subcommittee SC 4, *Woodworking machines*. [kSIST FprEN ISO 19085-17:2021](https://standards.iteh.ai/catalog/standards/sist/fd8780ae-d7e6-4359-8e1f-41c76580464c/iso-19085-17:2020)

This document is intended to be used in conjunction with ISO 19085-1:2020, 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.

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 to be provided to the user by the manufacturer.

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.

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

Thus, [Clauses 5, 6, 7 and 8](#) with their subclauses and the annexes of this document can either

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

the corresponding subclauses or annexes of ISO 19085-1.

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

- “ISO/DIS 19085-1:2019, [subclause/Annex], applies”;
- “ISO/DIS 19085-1:2019, [subclause/Annex], applies with the following additions.” or “ISO/DIS 19085-1:2019, [subclause/Annex], applies with the following additions, subdivided into further specific subclauses.”;
- “ISO/DIS 19085-1:2019, [subclause/Annex], does not apply.”;
- “ISO/DIS19085-1:2019,[subclause/Annex],isreplacedbythefollowingtext.” or “ISO/DIS19085-1:2019, [subclause/Annex], is replaced by the following text, subdivided into further specific subclauses.”.

Specific subclauses and annexes in this document without correspondent in ISO/DIS 19085-1:2019 are indicated by the introductory sentence: “Subclause/Annex specific to this document.”.

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

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Woodworking machines — Safety —

Part 17:

Edge banding machines fed by chains

1 Scope

This document gives the safety requirements and measures for edge banding machines fed by chains, with manual loading and unloading and maximum workpiece height capacity of 100 mm, capable of continuous production use, hereinafter referred as “machines”.

It deals with all significant hazards, hazardous situations and events as listed in [Clause 4](#) relevant to 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 are taken into account.

The machine is designed to process in one pass, one end (single end machine) or both ends (double end machine) panels of:

- materials with similar physical characteristics to wood (see ISO/DIS 19085-1:2019, 3.2), even with a core sheet of aluminum light alloy,
- gypsum plaster boards.

Edges to be applied by the machine may be made of:

- paper;
- melamine;
- plastic;
- composite materials;
- aluminum;
- light alloy;
- veneer;
- solid wood.

Workpiece feeding chains also include “feeding belts”.

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

- hot air banding unit;
- power laser banding unit;
- dynamic processing units;
- sanding belt units;
- milling unit installed out of the integral enclosure at the panel side on single end machines;
- milling unit installed out of the integral enclosure between machines halves of double end machines;

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- additional fixed or movable workpiece support along the feed;
- additional infeed workpiece support;
- additional outfeed workpiece support;
- in-feed device for transversal loading of panels in single end machines;
- intermediate workpiece support in double end machines;
- automatic panel returner in single end machines;
- automatic tool changing;
- quick tool changing system;
- automatic multiple edges infeed device.

This document does not deal with any hazards relating to:

- a) systems for loading and unloading of the workpiece to a single machine other than automatic panel returner and infeed and outfeed workpiece supports (e.g. robots);
- b) the combination of a single machine being used with other machines (as part of a line);
- c) workpiece dividing unit installed out of the integral enclosure and /or whose tools protrude out of the integral enclosure;
- d) plasma banding unit.

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It is not applicable to machines intended for use in potentially explosive atmosphere nor manufactured before the date of its publication.

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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.

ISO 11553-1:2005, *Safety of machinery — Laser processing machines — Part 1: General safety requirements*

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

ISO 13732-1:2006, *Ergonomics of the thermal environment — Methods for the assessment of human responses to contact with surfaces — Part 1: Hot surfaces*

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

ISO 14119:2013, *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection*

ISO/DIS 19085-1:2019, *Woodworking machines – Safety – Part-1: common requirements*

IEC 61310-1:2007, *Safety of machinery – Indication, marking and actuation – Part 1: Requirements for visual, acoustic and tactile signals*

IEC 60825-1:2014, *Safety of laser products – Part 1: Equipment classification and requirements*

EN 847-1:2017, *Tools for woodworking – Safety requirements – Part 1: Milling tools, circular saw blades*

EN 847-2:2017, *Tools for woodworking – Safety requirements – Part 2: Requirements for the shank of shank mounted milling tools/circular saw blades*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12100:2010, in ISO 13849-1:2015, in ISO/DIS 19085-1:2019 and the following apply.

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

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

3.1

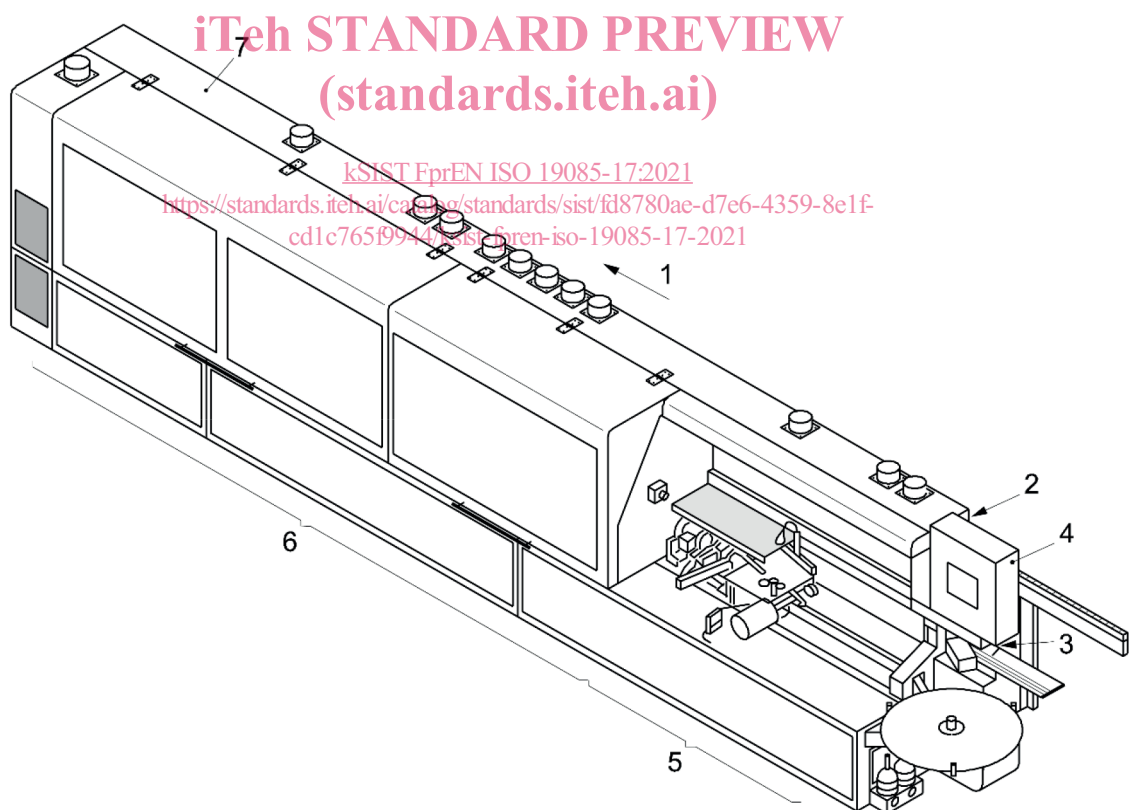
edge banding machine fed by chains

machine designed for banding in one pass the edge on one side of the workpiece (single end edge banding machine) or on both sides of the workpiece (double end edge banding machine), consisting of an edge banding zone with various units (e.g. for heating, banding, pressing of the edge, etc.), of a zone for additional operations (e.g. for snipping, trimming, milling, sanding, polishing, chamfering, etc.) and in addition a sizing/profiling zone that may precede the edge banding zone.

Note 1 to entry: The main parts of a single end machine and a double end machine and their terminology are illustrated in [Figures 1](#) and [2](#) respectively.

Note 2 to entry: Banding consists of applying glue to the edge or to the workpiece side.

Note 3 to entry: Workpiece feeding may be by chains or by feeding belts.



Key

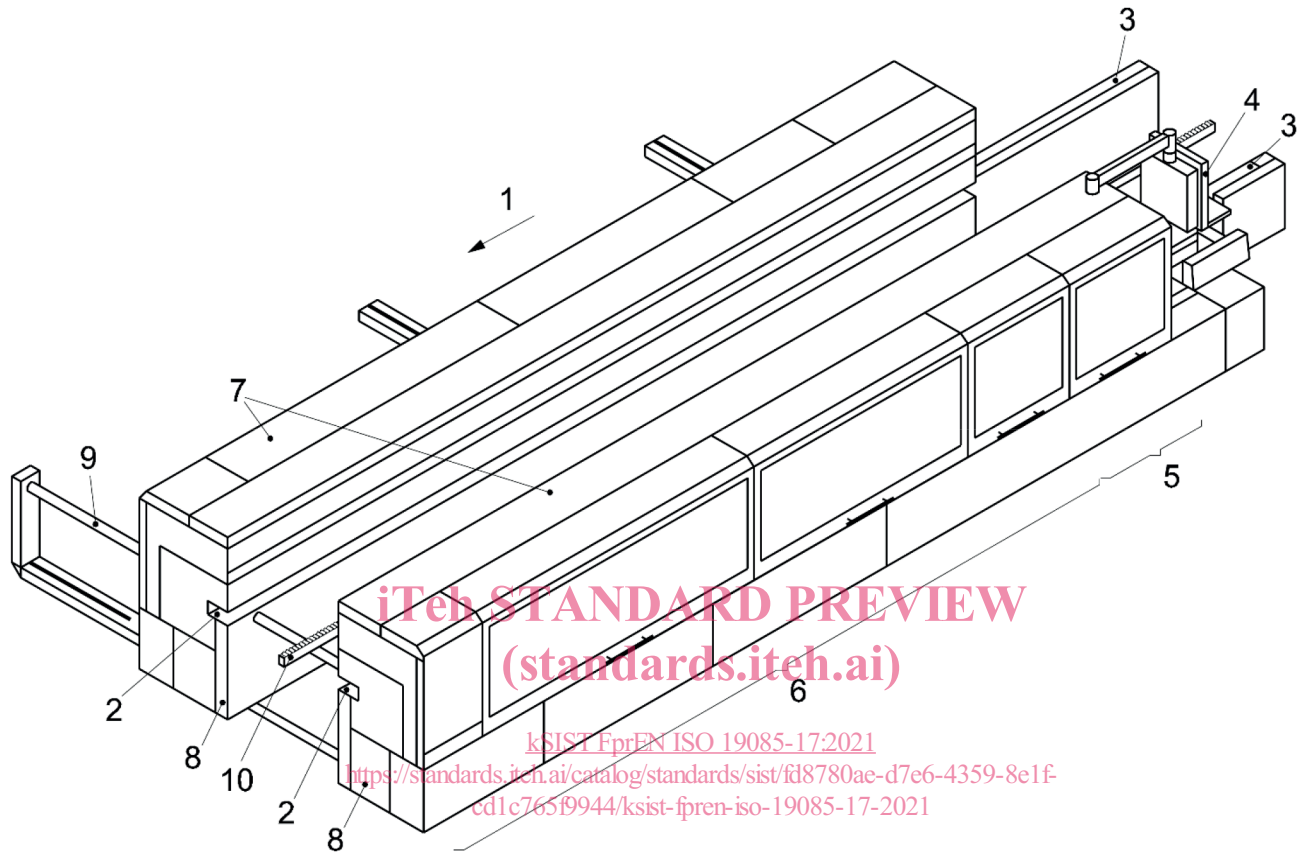
- | | | | |
|---|-------------------|---|---------------------------|
| 1 | Feed direction | 5 | Edge banding zone |
| 2 | Top pressure beam | 6 | Additional operation zone |
| 3 | Chain / belt beam | 7 | Integral enclosure |
| 4 | Controls | | |

Figure 1 — Example of a single end machine

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3.2 machine half

part of a machine consisting of a frame, chain/belt beam, top pressure beam and working units. Each machine half processes one, different, end of the workpiece. One or both machine halves are capable of being moved to accept workpieces of different dimensions



Key

- | | |
|---------------------|-----------------------------------|
| 1 Feed direction | 6 Additional operation zone |
| 2 Top pressure beam | 7 Integral enclosure |
| 3 Chain beam | 8 Machine halves |
| 4 Controls | 9 Feed cross drive shaft |
| 5 Edge banding zone | 10 Intermediate workpiece support |

Figure 2 — Example of a double end machine

3.3 integral enclosure (double and single end machines)

guarding designed to fit close to the machine and provide a measure of sound attenuation and where certain setting adjustments may be available outside the enclosure.

Note 1 to entry: Each machine half is provided with separate guarding and on the adjustable machine half/halves this guarding moves with it when adjustment is made for workpiece width

3.4 gluing unit

unit for the adhesion of the edge to the panel by any technology

Note 1 to entry: Hot melt banding unit, hot air banding unit, laser banding unit are gluing units

3.5**hot melt banding unit**

unit heating hot melt glue

3.6**hot air banding unit**

unit heating the edge using high temperature compressed air for edge banding, without addition of glue

Note 1 to entry: Hot air banding unit may be alternative or additional to other banding units

3.7**power laser banding unit**

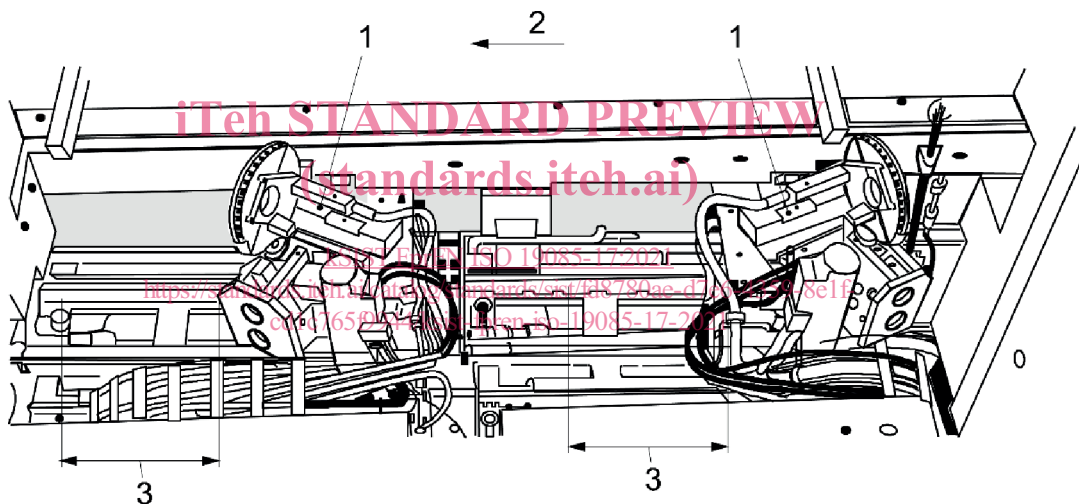
unit heating the edge using laser radiation for edge banding, without addition of glue

Note 1 to entry: Power laser banding unit may be alternative or additional to other banding units

3.8**dynamic processing unit**

unit which moves with the workpiece during processing and returns to its starting position ready for the following (succeeding) workpiece

Note 1 to entry: An example of dynamic processing unit is shown in [Figure 3](#)

**Key**

- 1 Dynamic processing unit (e.g. sniper saw)
- 2 Feed direction
- 3 Movement zone

Figure 3 — Example of a dynamic processing unit

3.9**milling unit installed out of the integral enclosure at the panel side on single end machines**

milling unit for grooving along the lower surface of the processed panel or for grooving/milling along the panel side opposite to the banded one

Note 1 to entry: An example of unit for grooving along the lower surface of the processed panel or along the panel side opposite to the banded one is shown in [Figure 4](#)

Note 2 to entry: An example of unit for milling along the panel side opposite to the banded one is shown in [Figure 5](#)