



**SLOVENSKI STANDARD**  
**oSIST prEN ISO 19085-14:2019**  
**01-april-2019**

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**Lesnoobdelovalni stroji - Varnost - 14. del: Rezkalni stroji za štiristransko obdelavo (ISO/DIS 19085-14:2019)**

Woodworking machines - Safety - Part 14: Four-sided moulding machines (ISO/DIS 19085-14:2019)

Holzbearbeitungsmaschinen - Sicherheit - Teil 14: Fräsmaschinen für vierseitige Bearbeitung (ISO/DIS 19085-14:2019)

Machines pour le travail du bois - Sécurité - Partie 14: Machines à moulurer sur quatre faces (ISO/DIS 19085-14:2019)

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**ICS:**

79.120.10      Lesnoobdelovalni stroji      Woodworking machines

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# DRAFT INTERNATIONAL STANDARD

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## Woodworking machines — Safety —

### Part 14: Four-sided moulding machines

*Machines pour le travail du bois — Sécurité —**Partie 14: Machines à moulurer sur quatre faces*

ICS: 13.110; 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](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)).

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](http://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, 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.

For CEN Members: This document supersedes EN 12750:2013.



## 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, 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 right after the title by one of the following statements:

- “**ISO 19085-1:2017**, [subclause/Annex], applies”;
- “**ISO 19085-1:2017**, [subclause/Annex], applies with the following additions.” or “**ISO 19085-1:2017**, [subclause/Annex], applies with the following additions, subdivided into further specific subclauses.”;
- “**ISO 19085-1:2017**, [subclause/Annex], does not apply.”;
- “**ISO 19085-1:2017**, [subclause/Annex], is replaced by the following text.” or “**ISO 19085-1:2017**, [subclause/Annex], 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/Annex specific to this document."

Clauses 1, 2, 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.

NOTE Requirements for tools are given in EN 847-1:2017 and EN 847-2:2017.

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# Woodworking machines — Safety — Part 14: Four sided moulding machines

## 1 Scope

This part of ISO 19085 gives the safety requirements and measures for stationary four-sided moulding machines with a maximum working width of 350 mm and a maximum speed of the integrated work-piece feed of 200 m/min, hereinafter referred to as “machines”, designed to cut solid wood and materials with similar physical characteristics to wood (see ISO 19085-1:2017, 3.2).

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.

NOTE 1: 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:

- universal spindle;
- glass bead saw unit;
- fixed or movable work-piece support;
- quick tool changing system;
- laser marking unit;
- automatic work-piece returner;
- in-feed hopper;
- loading magazine;
- unloading table.

This part of ISO 19085 does not deal with any hazards related to:

- a) in-feed devices other than in-feed hopper and loading magazine;
 

NOTE 2: For mechanical in-feed devices which also prevent access to the in-feed opening, see 6.6.4
- b) out-feed devices other than unloading table, except for hazards related to ejection from the machine due to climb cutting;
- c) out-feed of work-pieces on machines with feed speed higher than 60 m/min;
- d) machines being used in combination with any other machine (as part of a line).

It is not applicable to machines intended for use in potentially explosive atmosphere and to machines manufactured prior to its publication.

## 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/DIS 19085-14:2019(E)**  
**ISO 19085-14:2018**

ISO 7960:1995, *Airborne noise emitted by machine tools — Operating conditions for woodworking machines*

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 – 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 12198-1:2000+A1:2008, *Safety of machinery - Assessment and reduction of risks arising from radiation emitted by machinery - Part 1: General principles*

EN 1837:1999+A1:2009, *Safety of machinery – Integral lighting of machines*

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

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### 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 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

##### **four-sided moulding machine**

machine for four-sided longitudinal processing with four or more working units with spindles, which can be equipped with planing and/or moulding tools, at least one unit on each side of the work-piece, and with integrated feed of the work-piece

Note 1 to entry: machines where the first feed roller is fitted after the first tool and machines where the feed roller before the first bottom spindle can be raised up for the purpose of straightening are, for the purpose of this document, also integrated fed machines.

#### 3.2

##### **universal spindle**

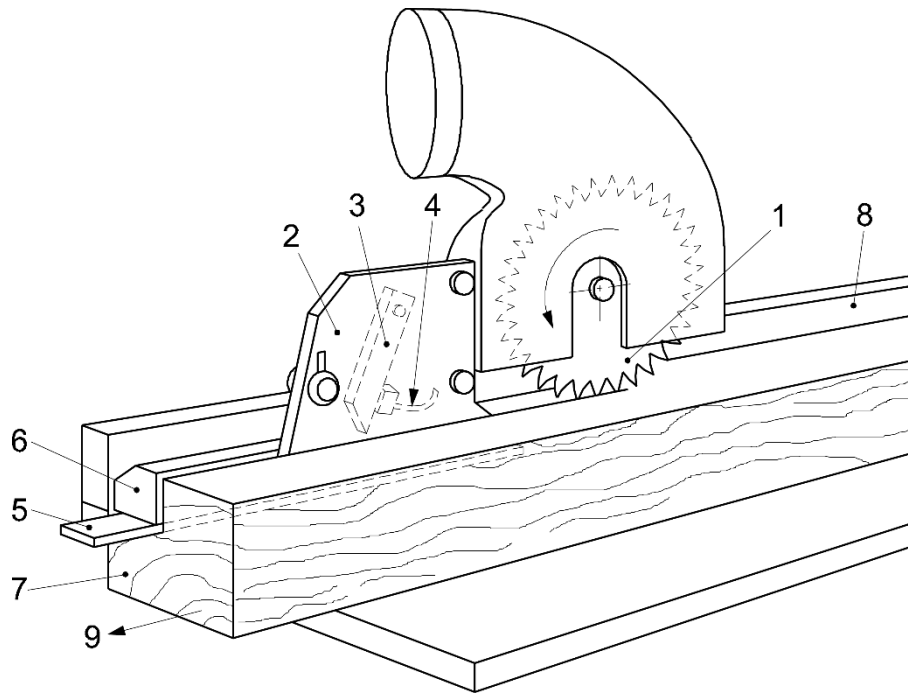
working unit whose position can be changed manually or under power so as to allow it to work at different positions around the work-piece

#### 3.3

##### **glass bead saw unit**

working unit fitted with a tool, usually a saw blade, with or without coaxially mounted milling tool, to cut out a glass bead from the machined profile of the work-piece

Note 1 to entry: An example of glass bead saw unit is shown in Figure 1.



#### Key

1 glass bead saw-blade	2 bed ledge separator	3 anti-kickback finger
4 pressure device	5 guiding channel for glass bead ledge	6 glass bead ledge
7 work-piece	8 fence	9 feed direction

**Figure 1 — Example of glass bead saw unit**

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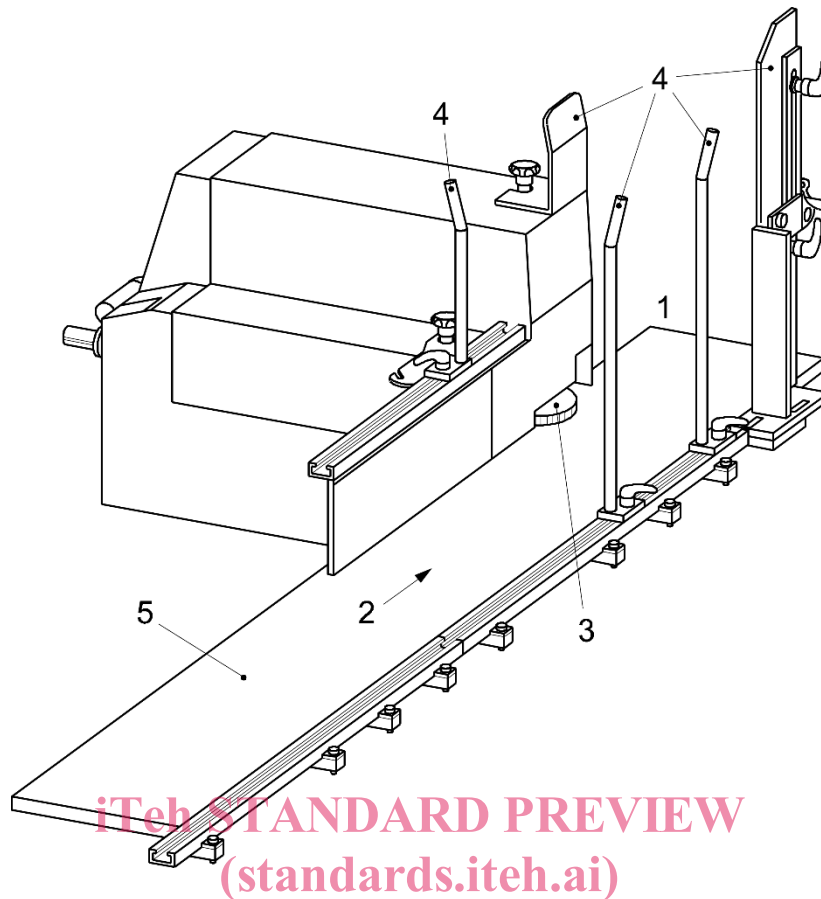
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#### 3.4

##### **in-feed hopper**

Device to hold a stack of work-pieces at the infeed, so that, after the lowest one is fed, the second can be taken by the machine automatically

Note 1 to entry: An example of in-feed hopper is shown in Figure 2.

**Key**

1 infeed-end of the machine

2 feed direction

3 feed roller

4 work-pieces stack vertical guides

5 workpiece support

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**Figure 2 — Example of in-feed hopper****3.5****loading magazine**

system where the work-pieces are loaded, independently from the operational sequence of the machine, with a device to bring them to the machine feed in sequence

Note 1 to entry: An example of loading magazine is shown in Figure 3 (without safeguards).

**3.6****automatic work-piece returner**

Powered system that brings the machined work-piece from the machine end to the loading position

Note to entry: An example of automatic work-piece returner is shown in Figure 4 (without safeguards).

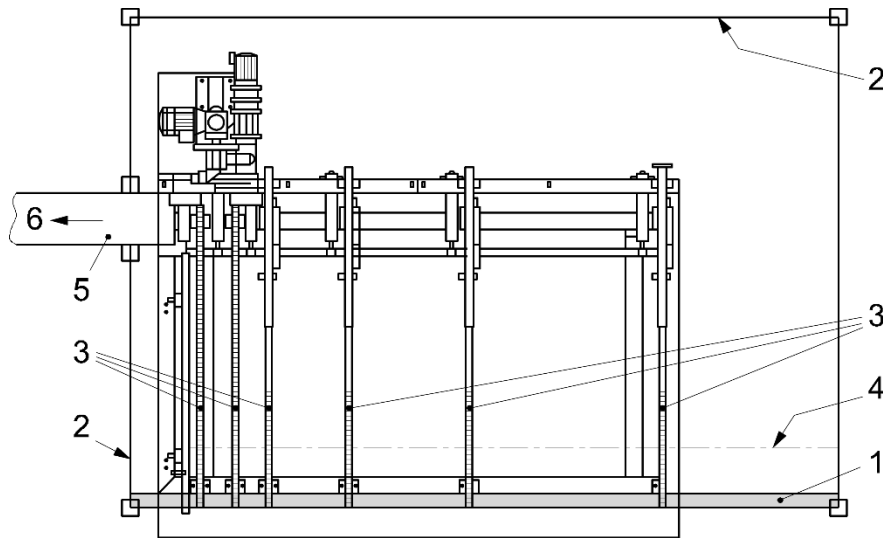
**3.7****integral enclosure**

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

**3.8****complete enclosure**

total machine enclosure primarily designed for noise attenuation and to permit the operator to move around freely within it and where all machine setting and adjustments are available inside it and access is normally through a door/opening

Note 1 to entry: The complete enclosure usually contains openings for work-piece loading and unloading. The openings are usually equipped with sound-absorbing sections for noise attenuation.



#### Key

- |                        |                  |
|------------------------|------------------|
| 1 fixed guard          | 2 lateral fence  |
| 3 loading belts/chains | 4 AOPD           |
| 5 machine infeed table | 6 feed direction |

### Figure 3 — Example of loading magazine (standards.iteh.ai)

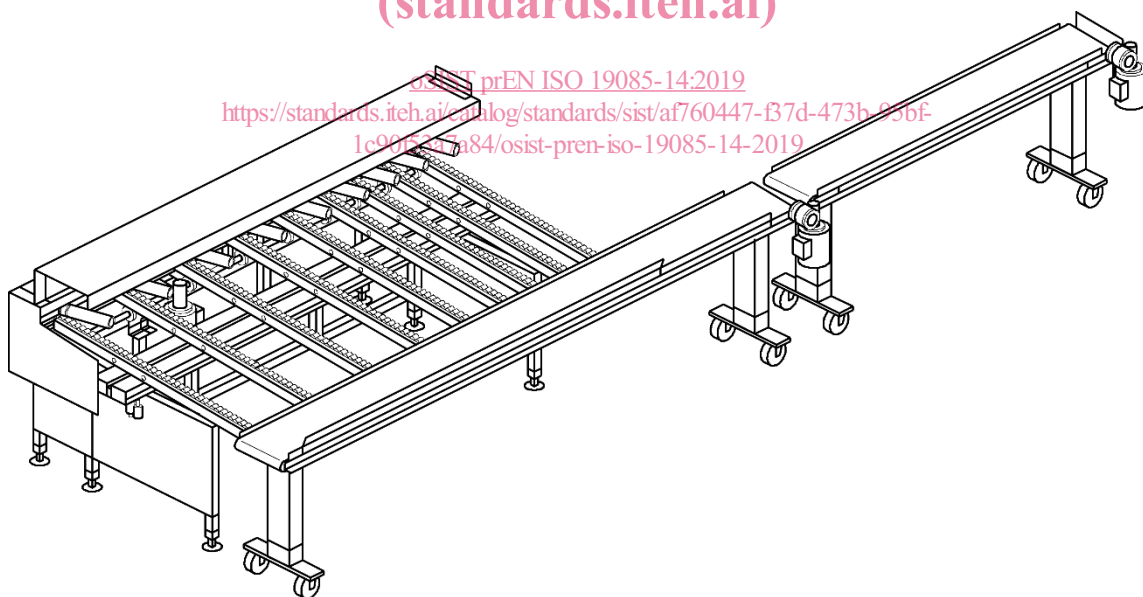


Figure 4 — Example of automatic work-piece returner

#### 3.9 sound-absorbing section

technical noise attenuation measure at the in-feed and/or out-feed opening designed to absorb airborne noise

#### 3.10 tele-service

machine diagnosis (including trouble-shooting), software update and tele-control from a remote service site