



SLOVENSKI STANDARD
oSIST prEN ISO 19085-7:2022
01-september-2022

Lesnoobdelovalni stroji - Varnost - 7. del: Poravnalni, debelinski in kombinirani skobeljni stroji (ISO/DIS 19085-7:2022)

Woodworking machines - Safety - Part 7: Surface planing, thickness planing, combined surface/thickness planing machines (ISO/DIS 19085-7:2022)

Holzbearbeitungsmaschinen - Sicherheit - Teil 7: Abrichthobel-, Dickenhobel-, kombinierte Abricht- und Dickenhobelmaschinen (ISO/DIS 19085-7:2022)

Machines à bois - Sécurité - Partie 7: Machines à dégauchir, à raboter et machines combinées à dégauchir/raboter (ISO/DIS 19085-7:2022)

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Part 7: Surface planing, thickness planing, combined surface/ thickness planing machines

Machines à bois — Sécurité —

Partie 7: Machines à dégauchir, à raboter et machines combinées à dégauchir/raboter

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Contents

	Page
Foreword.....	vi
Introduction.....	vii
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	2
4 Safety requirements and measures for controls.....	7
4.1 Safety and reliability of control systems.....	7
4.2 Control devices.....	7
4.3 Start.....	10
4.3.1 Direct start.....	10
4.3.2 Start via control power-on.....	10
4.4 Safe stops.....	10
4.4.1 General.....	10
4.4.2 Normal stop.....	10
4.4.3 Operational stop.....	11
4.4.4 Emergency stop.....	11
4.5 Braking function of tools.....	11
4.6 Mode selection.....	11
4.7 Tool speed changing.....	11
4.7.1 Speed changing by shifting the belts on the pulleys.....	11
4.7.2 Speed changing by incremental speed change motor.....	11
4.7.3 Infinitely variable speed by frequency inverter.....	11
4.8 Failure of any power supply.....	11
4.9 Manual reset control.....	11
4.10 Standstill detection and monitoring.....	11
4.11 Machine moving parts speed monitoring.....	11
4.12 Time delay.....	11
4.13 Teleservice.....	11
4.14 Power-operated adjustment of tables.....	12
5 Safety requirements and measures for protection against mechanical hazards.....	12
5.1 Stability.....	12
5.2 Risk of break-up during operation.....	12
5.3 Tool and tool fixing design.....	12
5.3.1 General.....	12
5.3.2 Spindle locking.....	13
5.3.3 Circular saw blade fixing device.....	13
5.3.4 Flange dimension for circular saw blades.....	13
5.4 Braking.....	13
5.4.1 Braking of tools.....	13
5.4.2 Maximum run-down time.....	13
5.4.3 Brake release.....	13
5.5 Safeguards.....	13
5.5.1 Fixed guards.....	13
5.5.2 Interlocking moveable guards.....	13
5.5.3 Hold-to-run control.....	13
5.5.4 Two-hand control.....	14
5.5.5 Electro-sensitive protective equipment (ESPE).....	14
5.5.6 Pressure sensitive protective equipment (PSPE).....	14
5.5.7 Enabling control.....	14
5.6 Prevention of access to hazardous moving parts.....	14
5.6.1 Cutter block guarding during surface planing.....	14
5.6.2 Guarding the cutter block and the feed mechanism during thickness planing.....	17

ISO/DIS 19085-7:2022(E)

5.6.3	Guarding during mortising	17
5.6.4	Guarding of drives	17
5.7	Impact hazard	17
5.8	Clamping devices	17
5.9	Measures against ejection	18
5.9.1	General	18
5.9.2	Guards material and characteristics	18
5.9.3	Anti-kickback devices	18
5.10	Workpiece supports and guides	19
5.10.1	General	19
5.10.2	Surface planing tables	20
5.10.3	Thickness planing table	21
5.10.4	Mortising table	21
5.10.5	Workpiece guiding during surface planing	22
5.10.6	Workpiece guiding during thickness planing	23
5.11	Safety appliances	23
6	Safety requirements and measures for protection against other hazards	24
6.1	Fire	24
6.2	Noise	24
6.2.1	Noise reduction at the design stage	24
6.2.2	Noise emission measurement and declaration	24
6.3	Emission of chips and dust	24
6.4	Electricity	25
6.5	Ergonomics and handling	25
6.6	Lighting	25
6.7	Pneumatics	25
6.8	Hydraulics	25
6.9	Electromagnetic compatibility	25
6.10	Laser	26
6.11	Static electricity	26
6.12	Errors of fitting	26
6.13	Isolation	26
6.14	Maintenance	26
6.15	Relevant but not significant hazards	26
7	Information for use	26
7.1	Warning devices	26
7.2	Marking	26
7.2.1	General	26
7.2.2	Additional markings	26
7.3	Instruction handbook	26
7.3.1	General	26
7.3.2	Additional information	26
	Annex A (informative) List of significant hazards	28
	Annex B (informative) Performance levels required	30
	Annex C (normative) Stability test	31
	Annex D (normative) Test for braking function	34
	Annex E (normative) Impact test for guards	35
	Annex F (normative) Noise test code	36
	Annex G (normative) Tests for bridge-type guards	40
	Annex H (normative) Resistance test for table lips on surface planing machines	42
	Annex I (normative) Kickback test	46

Annex ZA (informative) Relationship between this European Standard and the essential requirements of Directive 2006/42/EC aimed to be covered 47

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ISO/DIS 19085-7:2022(E)

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 of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 39, *Machine tools*, Subcommittee SC 4 *Woodworking machines*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 143, *Woodworking machines*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 19085-5:2017), which has been technically revised. The main changes are as follows:

- the Scope now specifies that machines are intended for continuous production use;
- the list of significant hazards has been moved to a new [Annex A](#);
- the structure has been simplified and modified, in particular in [5.6](#);
- [Subclause 6.2](#) has been updated and a new full noise test code has been added in [Annex F](#).

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

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.

Introduction

The ISO 19085 series of International Standards provides technical safety requirements for the design and construction of woodworking machinery, as well as for the content of the relevant instruction handbook. It concerns designers, manufacturers, suppliers and importers of the machines specified in the Scope.

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

This document is of relevance, in particular, for the following stakeholder groups representing the market players with regard to machinery safety:

- machine manufacturers (small, medium and large enterprises);
- health and safety bodies (e.g., regulators, accident prevention organisations, market surveillance)

Others can be affected by the level of machinery safety achieved with the means of the document by the above-mentioned stakeholder groups:

- machine users/employers (small, medium and large enterprises);
- machine users/employees (e.g., trade unions, organizations for people with special needs);
- service providers, e. g. for maintenance (small, medium and large enterprises);
- consumers (in case of machinery intended for use by consumers).

The above-mentioned stakeholder groups have been given the possibility to participate in the drafting process of this document.

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 (as defined in ISO 12100), 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 19085-1:2021, to the extent specified in the Scope of the applicable part of ISO 19085.

As far as possible, the safety requirements of parts of the ISO 19085 series refer to the relevant clauses of ISO 19085-1. Each part includes replacements and additions to the common requirements given in ISO 19085-1.

All parts of the ISO 19085 series have the same structure, so that reference to ISO 19085-1 is made always and only from and to the same subclause number, last indent.

[Clauses 1](#) to [3](#) are specific to each part and, therefore are distinct from ISO 19085-1:2021, Clauses 1 to 3.

For [Clauses 4](#) to [7](#) and the annexes, each subclause in ISO 19085-1:2021, is cited as:

- confirmed as a whole;
- confirmed with additions;
- excluded in total; or
- replaced with specific text.

ISO/DIS 19085-7:2022(E)

This is indicated by one of the following possible statements:

- “ISO 19085-1:2021, [subclause/Annex], applies.”;
- “ISO 19085-1:2021, [subclause/Annex], applies with the following additions.” or “ISO 19085-1:2021, [subclause/Annex], applies with the following additions, subdivided into further specific subclauses.”;
- “ISO 19085-1:2021, [subclause/Annex], does not apply.”;
- “ISO 19085-1:2021, [subclause/Annex], is replaced by the following text.” or “ISO 19085-1:2021, [subclause/Annex], is replaced by the following text, subdivided into further specific subclauses.”.

Other subclauses and annexes specific to this document are indicated by the introductory sentence: “Subclause/Annex specific to this document.”.

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Woodworking machines — Safety —

Part 7:

Surface planing, thickness planing, combined surface/ thickness planing machines

1 Scope

This document specifies the safety requirements and measures for

- surface planing machines, also called jointers,
- thickness planing machines, also called planers or single surface planers,
- combined surface/thickness planing machines

with fixed cutter block position, with an integrated feed in thickness planing mode, with or without demountable power feed device in planing mode, with manual loading and/or unloading of the workpiece and capable of continuous production use, hereinafter referred to also as “machines”.

The machines are designed to cut solid wood and material with similar physical characteristics to wood.

It deals with all significant hazards, hazardous situations and events as listed in [Annex A](#) relevant to the machines when operated, adjusted and maintained as intended and under the conditions foreseen by the manufacturer; reasonably foreseeable misuse has been considered too. Transport, assembly, dismantling, disabling and scrapping phases have also been taken into account.

It is also applicable to surface planing machines and combined surface/thickness planing machines fitted with an optional mortising device, whose hazards have been dealt with.

This document does not apply to:

- a) machines with more than one cutter block;
- b) machines with a mortising unit driven by a separate motor;
- c) machines where the cutter block is adjustable for depth of cut setting in thickness planing mode;
- d) machines where the conversion from planing to thickness planing mode or vice versa is achieved by mounting or demounting parts/units;
- e) machines where surface planing and thickness planing can be performed on the same section of the cutter block at the same time;
- f) machines intended for use in potentially explosive atmosphere;
- g) machines manufactured prior to the date of its publication as an international standard.

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 19085-7:2022(E)

ISO 4871:1996, *Acoustics — Declaration and verification of noise emission values of machinery and equipment*

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

ISO 13857:2019, *Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs*

ISO 19085-1:2021, *Woodworking machines — Safety — Part 1: Common requirements*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12100:2010, ISO 19085-1:2021 and the following apply.

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

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

3.1

cutter block

cylindrical shaped complex tool equipped with blades or inserts

Note 1 to entry: See also EN 847-1:2017 for a definition of complex tools.

3.2

surface planing machine jointer

machine designed for cutting off layers of the lower surface of a workpiece by a *cutter block* (3.1) rotating around a horizontal axis, mounted at right angles to the feed direction between two tables designed to position and support the workpiece that is fed into the machine against the direction of the cut

Note 1 to entry: The main parts of a surface planing machine and their terminology are shown in [Figure 1](#).

Note 2 to entry: Typical working operations at a surface planing machine are shown in [Figure 4](#).

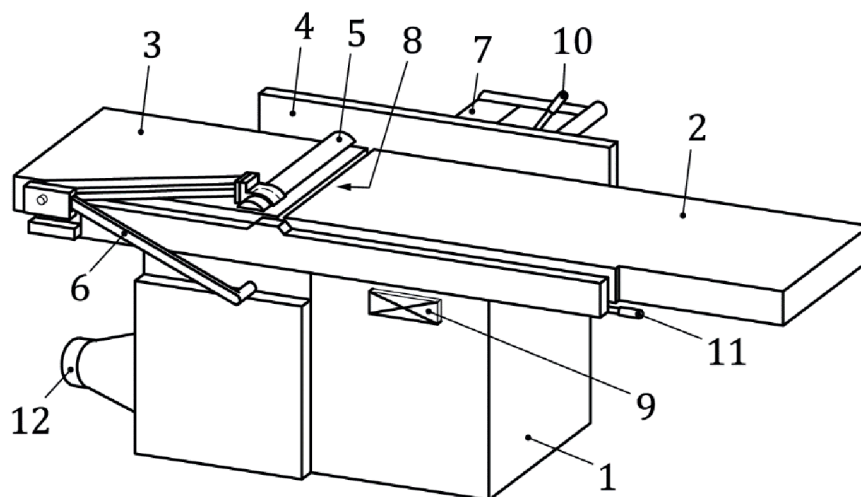
3.3

thickness planing machine single surface planer

machine designed for cutting off layers of the upper surface of a workpiece by a *cutter block* (3.1) rotating around a horizontal axis, mounted at right angles to the feed direction above the table designed to position and support the workpiece that is fed into the machine against the direction of the cut

Note 1 to entry: The main parts of a thickness planing machine and their terminology are shown in [Figure 2](#).

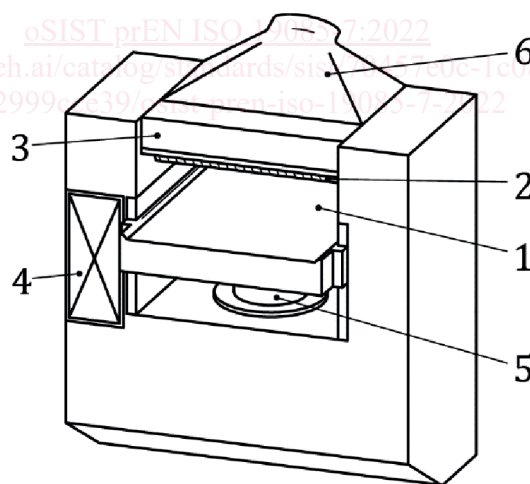
Note 2 to entry: The internal structure of a thickness planing machine is shown in [Figure 5](#).



Key

- | | | | |
|---|--|----|-----------------------------------|
| 1 | main frame | 7 | guard behind the fence |
| 2 | infeed table | 8 | cutter block |
| 3 | outfeed table | 9 | controls |
| 4 | tiltable fence | 10 | fence tilting adjustment |
| 5 | bridge-type guard | 11 | lever for table height adjustment |
| 6 | lever for bridge-type guard adjustment | 12 | dust extraction outlet |

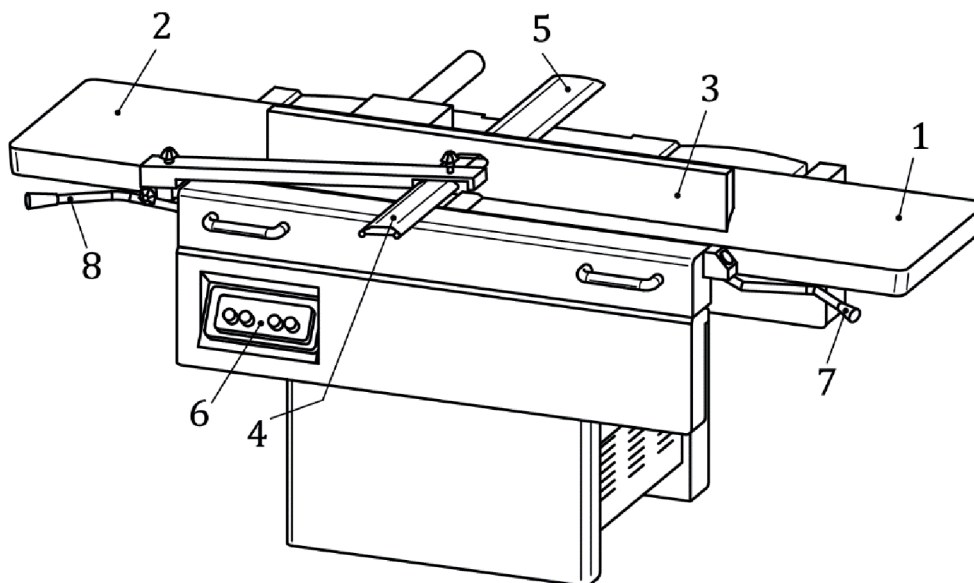
Figure 1 — Example of a surface planing machine



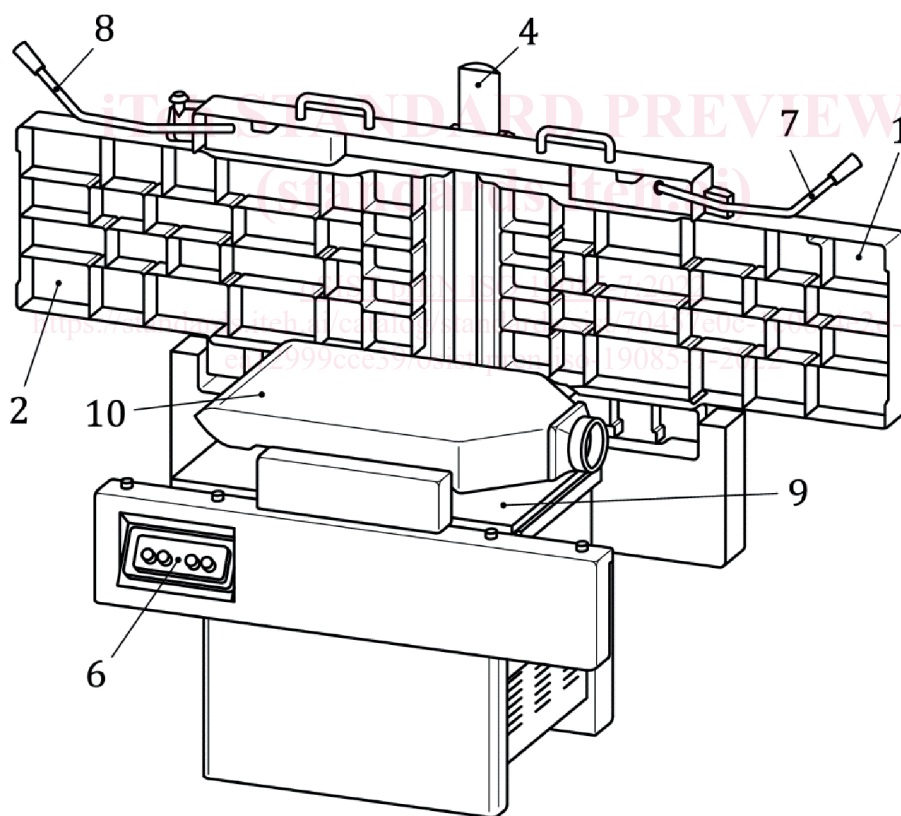
Key

- | | | | |
|---|-------------------------|---|----------------------|
| 1 | thickness planing table | 4 | controls |
| 2 | anti-kickback fingers | 5 | table lifting system |
| 3 | upper guard | 6 | extraction hood |

Figure 2 — Example of a thickness planing machine



a) Example of combined surface/thickness planing machine (set up for surface planing)



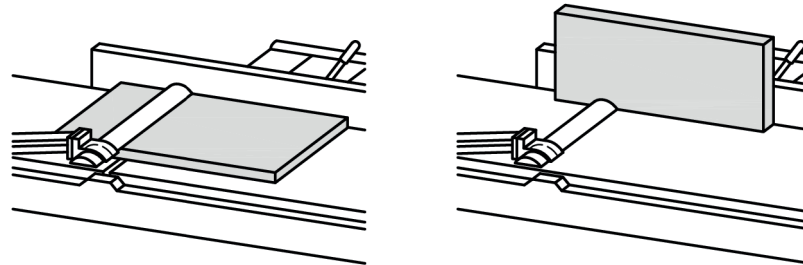
b) Example of combined surface/thickness planing machine (set up for thickness planing)

Key

- | | | | |
|---|-------------------|---|--------------------------------|
| 1 | infeed table | 6 | controls |
| 2 | outfeed table | 7 | infeed table height adjustment |
| 3 | tiltable fence | 8 | bridge-type guard adjustment |
| 4 | bridge-type guard | 9 | thickness planing table |

5 guard behind the fence

10 guard for thickness planing mode

Figure 3 — Example of combined surface/thickness planing machine**Figure 4 — Typical surface planing operations: planing (left) and edging (right)**

3.4 combined surface/thickness planing machine combined jointer/single surface planer

combined machine that allows surface planing as well as thickness planing

Note 1 to entry: The main parts of a combined surface/thickness planing machine and their terminology are shown in [Figure 3](#).

Note 2 to entry: The workpiece is fed into the machine against the direction of the cut.

Note 3 to entry: Combined surface/thickness planing machines may also be fitted with an optional *mortising device* ([3.7](#)).

Note 4 to entry: During surface planing, the workpiece is passed over the *cutter block* ([3.1](#)) located between two tables which are used to position and support the workpiece and the lower surface is planed. The infeed table of the surface planing unit is adjustable in height.

Note 5 to entry: For thickness planing, both surface *planing tables* ([3.5](#)) can be raised. The workpiece rests on the *thickness planing table* ([3.6](#)); the distance between it and the cutting circle diameter is adjustable. The upper surface of the workpiece is planed.

3.5 surface planing table

table in front and behind the *cutter block* ([3.1](#)) used to support the workpiece during planing of the lower surface

3.6 thickness planing table

table used to support the workpiece during thickness planing at the machine which can comprise an assembly of rollers, belts or other fixed or moving mechanical elements

3.7 mortising device

fixed or detachable element of a machine which is designed for slot boring (mortising) or boring by means of a single rotating tool and a moveable table

Note 1 to entry: The tool holding device, e.g., chuck, is mounted on one end of the *cutter block* ([3.1](#)) (see [Figure 6](#)).

3.8 initiation control

control which after actuation enables providing power to specific machine actuators, e.g., by a programmable logic control