



SLOVENSKI STANDARD
oSIST prEN ISO 19085-11:2022
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Lesnoobdelovalni stroji - Varnost - 11. del: Kombinirani stroji (ISO/DIS 19085-11:2022)

Woodworking machines - Safety - Part 11: Combined machines (ISO/DIS 19085-11:2022)

Holzbearbeitungsmaschinen - Sicherheit - Teil 11: Kombinierte Maschinen (ISO/DIS 19085-11:2022)

Machines à bois - Sécurité - Partie 11: Machines combinées (ISO/DIS 19085-11:2022)

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Woodworking machines — Safety —

Part 11: Combined machines

*Machines à bois — Sécurité —**Partie 11: Machines combinées*

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Contents

Page

Foreword.....	v
Introduction.....	vi
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	2
4 Safety requirements and measures for controls.....	6
4.1 Safety and reliability of control systems.....	6
4.2 Control devices.....	7
4.3 Start.....	7
4.3.1 Direct start.....	7
4.3.2 Start via control power-on.....	8
4.4 Safe stops.....	8
4.4.1 General.....	8
4.4.2 Normal stop.....	8
4.4.3 Operational stop.....	8
4.4.4 Emergency stop.....	8
4.5 Braking function of tools.....	8
4.6 Mode selection.....	8
4.7 Tool speed changing.....	9
4.7.1 Speed changing by shifting the belts on the pulleys.....	9
4.7.2 Speed changing by incremental speed change motor.....	9
4.7.3 Infinitely variable speed by frequency inverter.....	9
4.7.4 Spindle speed limiting device for tenoning.....	9
4.7.5 Changing of the direction of spindle rotation.....	9
4.8 Failure of any power supply.....	9
4.9 Manual reset control.....	9
4.10 Standstill detection and monitoring.....	9
4.11 Machine moving parts speed monitoring.....	9
4.12 Time delay.....	9
4.13 Teleservice.....	9
4.14 Power-driven adjustments.....	9
5 Safety requirements and measures for protection against mechanical hazards.....	10
5.1 Stability.....	10
5.2 Risk of break-up during operation.....	10
5.3 Tool and tool fixing design.....	10
5.3.1 General.....	10
5.3.2 Spindle locking.....	10
5.3.3 Circular saw blade fixing device.....	10
5.3.4 Flange dimensions for circular saw blades.....	10
5.3.5 Arbor rings/fixing device for milling tools.....	11
5.3.6 Quick tool/arbor change system.....	11
5.3.7 Manual adjustment of arbor height.....	11
5.3.8 Manual adjustment of arbor inclination.....	11
5.4 Braking.....	11
5.4.1 Braking of tools.....	11
5.4.2 Maximum run-down time.....	11
5.4.3 Brake release.....	11
5.5 Safeguards.....	11
5.5.1 Fixed guards.....	11
5.5.2 Interlocking movable guards.....	11
5.5.3 Hold-to-run control.....	12
5.5.4 Two hand control.....	12

ISO/DIS 19085-11:2022(E)

5.5.5	Electro-sensitive protection equipment (ESPE)	12
5.5.6	Pressure sensitive protection equipment (PSPE)	12
5.6	Prevention of access to hazardous moving parts	12
5.7	Impact hazard	12
5.8	Clamping devices	13
5.9	Measures against ejection	13
5.9.1	General	13
5.9.2	Guards materials and characteristics	13
5.9.3	Anti-kickback devices	13
5.10	Workpiece supports and guides	13
5.11	Safety appliances	14
5.12	Elements not in use	14
5.13	Adjustments in tenoning-sawing mode	14
6	Safety requirements and measures for protection against other hazards	14
6.1	Fire	14
6.2	Noise	15
6.2.1	Noise reduction at the design stage	15
6.2.2	Noise emission measurement and declaration	15
6.3	Emission of chips and dust	15
6.4	Electricity	15
6.5	Ergonomics and handling	15
6.6	Lighting	15
6.7	Pneumatics	15
6.8	Hydraulics	15
6.9	Electromagnetic compatibility	16
6.10	Laser	16
6.11	Static electricity	16
6.12	Errors of fitting	16
6.13	Isolation	16
6.14	Maintenance	16
6.15	Relevant but not significant hazards	16
7	Information for use	16
7.1	Warning devices	16
7.2	Markings	16
7.2.1	General	16
7.2.2	Additional markings	16
7.3	Instruction handbook	17
7.3.1	General	17
7.3.2	Additional information	17
	Annex A (informative) List of significant hazards	18
	Annex B (informative) Performance level required	20
	Annex C (normative) Stability test	21
	Annex D (normative) Test for braking function	22
	Annex E (normative) Impact test for guards	23
	Annex F (normative) Noise test code	24
	Annex G (normative) Table dimensions	26
	Annex ZA (informative) Relationship between this European Standard and the essential requirements of Directive 2006/42/EC aimed to be covered	28

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 142, *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 19085-11:2020), 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](#);
- [Subclause 6.2](#) has been updated and a new noise test code has been specified 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.

ISO/DIS 19085-11:2022(E)

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, in this document, safety requirements are referenced to the relevant sections of ISO 19085-1:2021, ISO/FDIS 19085-5:2022, ISO/FDIS 19085-6:2022, ISO/DIS 19085-7:2022 and ISO/DIS 19085-9:2022 to avoid repetition and reduce their length.

Specific subclauses and annexes in this document without correspondent in ISO 19085 1:2021, ISO/FDIS 19085 5:2022, ISO/FDIS 19085 6:2022, ISO/DIS 19085-7:2022 and ISO/DIS 19085-9:2022 are indicated by the introductory sentence: “Subclause (or annex) specific to this document.”

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

Woodworking machines — Safety —

Part 11: Combined machines

1 Scope

This document specifies the safety requirements and measures for combined woodworking machines (defined in 3.1), capable of continuous production use, with manual loading and unloading of the workpiece and 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, 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.

This document does apply to machines also equipped with the devices/additional working units listed in the Scopes of ISO/FDIS 19085 5:2022, ISO/FDIS 19085 6:2022, ISO/DIS 19085-7:2022 and ISO/DIS 19085-9:2022.

This document does not apply to:

- a) machines incorporating only a planing unit and a mortising device;
NOTE 3 Such machines are dealt with in ISO/DIS 19085-7:2022.
- b) combined machines incorporating a band saw unit;
- c) machines with a mortising unit with a separate drive other than the planing unit drive;
- d) machines intended for use in potentially explosive atmosphere;
- e) machines manufactured before 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 4871:2009, *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 14119:2013, *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection*

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

ISO 19085-5¹⁾, *Woodworking machines — Safety — Part 5: Dimension saws*

1) Under preparation. Stage at the time of publication: ISO/FDIS 19085-5:2022

ISO/DIS 19085-11:2022(E)

ISO 19085-6,²⁾ *Woodworking machines — Safety — Part 6: Single spindle vertical moulding machines (“toupies”)*

ISO 19085-7³⁾, *Woodworking machines — Safety — Part 7: Surface planing, thickness planing, combined surface/thickness planing machines*

ISO 19085-9⁴⁾, *Woodworking machines — Safety — Part 9: Circular saw benches (with and without sliding table)*

IEC 61800-5-2:2016, *Adjustable speed electrical power drive systems — Part 5-2: Safety requirements — Functional*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12100:2010, ISO 19085 1:2021, ISO/FDIS 19085 5:2022, ISO/FDIS 19085 6:2022, ISO/DIS 19085-7:2022, ISO/DIS 19085-9:2022 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 combined machine
 machine incorporating two or more separately usable working units, i.e., a *sawing unit* (3.2), a *moulding unit* (3.5) and/or a *planing unit* (3.6)

Note 1 to entry: Workpiece feed is primarily by hand, but the machine can also have devices for connection of demountable power feed units.

Note 2 to entry: The sawing unit and the moulding unit can work simultaneously.

Note 3 to entry: See examples of such machines in [Figures 2, 3, 4](#) and [5](#).

3.2 sawing unit
dimension saw unit (3.3), or *table saw unit* (3.4), incorporated in a *combined machine* (3.1)

3.3 dimension saw unit
 dimension saw incorporated in a *combined machine* (3.1)

Note 1 to entry: For the definition of dimension saws, also called sliding table circular sawing machine, see ISO/FDIS 19085-5:2022, 3.1.

3.4 table saw unit
 table saw incorporated in a *combined machine* (3.1)

Note 1 to entry: For the definition of table saws, also called circular saw benches, see ISO/DIS 19085-9:2022, 3.1.

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- 2) Under preparation. Stage at the time of publication: ISO/FDIS 19085-6:2022
 3) Under preparation. Stage at the time of publication: ISO/DIS 19085-7:2022
 4) Under preparation. Stage at the time of publication: ISO/DIS 19085-9:2022

3.5**moulding unit**

single spindle vertical moulding machine incorporated in a *combined machine* (3.1)

Note 1 to entry: For the definition of single spindle vertical moulding machines, see ISO/DIS 19085-6:2022, 3.1.

3.6**planing unit**

combined surface/thickness planing machine incorporated in a *combined machine* (3.1)

Note 1 to entry: For the definition of combined surface/thickness planing machines, see ISO/DIS 19085-7:2022, 3.4.

3.7**tenoning-sawing mode**

use of the *sawing unit* (3.2) and *moulding unit* (3.5) simultaneously to produce tenons

Note 1 to entry: For workpiece support, these machines are equipped with a movable workpiece support, e.g., sliding table, with workpiece clamping arrangements.

3.8**workstation position**

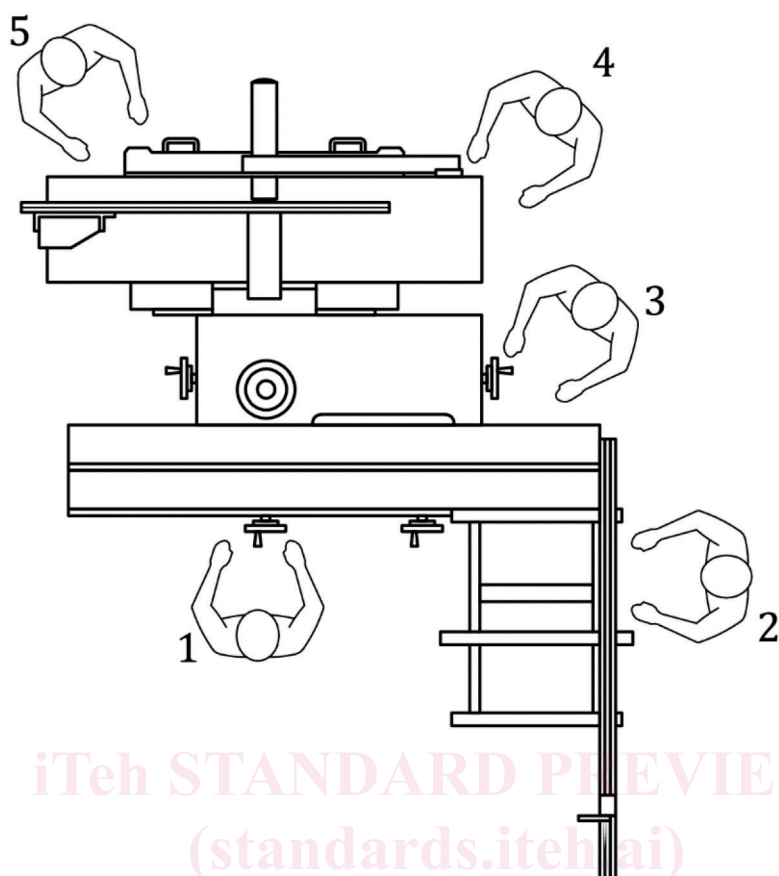
position to operate a working unit

Note 1 to entry: *Combined machines* (3.1) have more than one workstation position depending on the number of integrated working units (see [Figure 1](#)).

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Key

- 1 workstation position during moulding
- 2 workstation position during sawing
- 3 alternative workstation position during sawing
- 4 workstation position during thickness planing
- 5 workstation position during surface planing

Figure 1 — Typical workstation positions