
Lesnoobdelovalni stroji - Varnost - 12. del: Stroji za izdelovanje čepov in utorov/profilni stroji (ISO/DIS 19085-12:2026)

Woodworking machines - Safety - Part 12: Tenoning-profiling machines (ISO/DIS 19085-12:2026)

Holzbearbeitungsmaschinen - Sicherheit - Teil 12: Zapfenschneid- und Schlitzmaschinen-Profiliermaschinen (ISO/DIS 19085-12:2026)

Machines à bois - Sécurité - Partie 12: Machines à tenonner-profiler (ISO/DIS 19085-12:2026)

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79.120.10	Lesnoobdelovalni stroji	Woodworking machines

oSIST prEN ISO 19085-12:2026

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DRAFT International Standard

ISO/DIS 19085-12

Woodworking machines — Safety — Part 12: Tenoning-profiling machines

Machines à bois — Sécurité —

Partie 12: Machines à tenonner-profiler

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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 document 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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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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 – Safety*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This document is intended to be used in conjunction with ISO 19085-1:2026.

This third edition cancels and replaces the second edition (ISO 19085-12:2024), which has been technically revised. The main changes are as follows:

- the way of reference from this document to ISO 19085-1:2026 has been simplified, as well as its explanation in Introduction, and aligned to ISO drafting rules;
- the verification methods at the end of each subclause have been deleted, since self-evident;
- [4.2](#), [4.6](#), [7.2](#), [7.3](#) have been rearranged, to follow the new subdivision in ISO 19085-1:2026;
- [4.7.3](#), [5.10](#) have been subdivided, to follow the new subdivision in ISO 19085-1:2026;
- [5.4](#), [5.9](#) have been simplified in structure, for easier reading;
- in [4.6.4](#), fine adjustment mode (MODE 3) has been added, with limitations, to avoid tampering;
- requirements for double-end machine where a half can shift along the feed have been added in [5.6.4.5](#), [5.6.4.6](#) and [5.6.4.7](#).

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.

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Introduction

The ISO 19085 series 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 stated in ISO 12100:2010.

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 (regulators, accident prevention organisations, market surveillance etc.).

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 at 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, 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.

In this document, a subclause can refer to the same subclause of ISO 19085-1:2026 or give specific requirements or both.

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Woodworking machines — Safety —

Part 12: Tenoning-profiling machines

1 Scope

This document specifies the safety requirements and measures for manually loaded and unloaded

- single-end tenoning machines with a manual feed sliding table,
- single-end tenoning machines with a mechanical feed sliding table,
- single-end tenoning-profiling machines with mechanical feed,
- double-end tenoning-profiling machines with mechanical feed, also designed to be automatically either loaded or unloaded, or both, and
- angular systems for tenoning and profiling with mechanical feed

with maximum workpiece height capacity of 200 mm for single-end machines and 500 mm for double-end machines, capable of continuous production use, altogether referred to as “machines”.

This document deals with all significant hazards, hazardous situations or hazardous events, listed in [Annex A](#), relevant to the machines when used as intended and under conditions of misuse which are reasonably foreseeable, as well as when transported, assembled, adjusted, maintained, dismantled, disabled and scrapped.

The machines are designed to process in one pass one end or two sides, either opposite or perpendicular to each other, of workpieces made of solid wood or of materials with similar physical characteristics to wood (see ISO DIS 19085-1:2026, 3.2).

The machines with mechanical feed only are designed to process in the same ways also workpieces made of:

- fibre-cement,
- rock wool and glass wool,
- gypsum,
- plasterboard,
- matrix engineered mineral boards, silicate boards and sulfate boards,
- composite materials with core consisting of polyurethane or mineral material laminated with light alloy,
- polymer-matrix composite materials and reinforced thermoplastic, thermoset and elastomeric materials,
- aluminium light alloy profiles, and
- composite boards made from the materials listed above.

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

- sanding units;

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- fixed or movable workpiece support;
- automatic tool changing;
- automatic workpiece returner;
- glass bead saw unit;
- hinge recessing unit;
- boring unit;
- dynamic processing unit;
- sawing unit installed between machine halves in double-end machines;
- foiling unit;
- coating unit;
- grooving unit with a milling tool installed between machine halves;
- brushing unit;
- gluing unit;
- sealing unit;
- dowels inserting unit;
- tongues inserting unit;
- inkjet marking unit;
- laser marking unit;
- labelling unit;
- workpiece back-up device (device that is either anti-chipping or anti-splintering, or both);
- quick tool changing system;
- post-formed edge pre-cutting unit;
- additional workpiece support (at either infeed or outfeed, or both);
- parallel infeed device on single-end machines;
- transversal infeed device on single-end machines;
- intermediate workpiece support on double-end machines;
- automatic infeed device;
- feed chain with dogs;
- automatic tool change device;
- capability to shift a machine half along the feed in double-end tenoning-profiling machines with maximum workpiece height capacity of 40 mm and no unit installed out of the integral enclosure.

This document does not deal with any hazards related to:

- a) systems for automatic loading and unloading of the workpiece to a single machine other than automatic workpiece returner;

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- b) single machine being used in combination with any other machine (as part of a line);
- c) use of tools, other than saw blades or boring tools or milling tools for grooving, installed between machine halves and out of the integral enclosure in double-end machines;
- d) use of tools protruding out of the integral enclosure;
- e) chemical characteristics of all materials listed in the 4th paragraph above and their dust.

This document is not applicable to machines intended for use in potentially explosive atmosphere nor 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 286-2:2010, *Geometrical product specifications (GPS) — ISO code system for tolerances on linear sizes — Part 2: Tables of standard tolerance classes and limit deviations for holes and shafts*

ISO 11553-1:2020, *Safety of machinery — Laser processing machines — Part 1: Laser safety requirements*

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

ISO 13849-1:2023, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design*

ISO 13856-2:2013, *Safety of machinery — Pressure-sensitive protective devices — Part 2: General principles for design and testing of pressure-sensitive edges and pressure-sensitive bars*

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

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

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

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

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12100:2010, ISO 13849-1:2023, ISO/DIS 19085-1:2026 and the following apply.

ISO and IEC maintain terminology 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/>

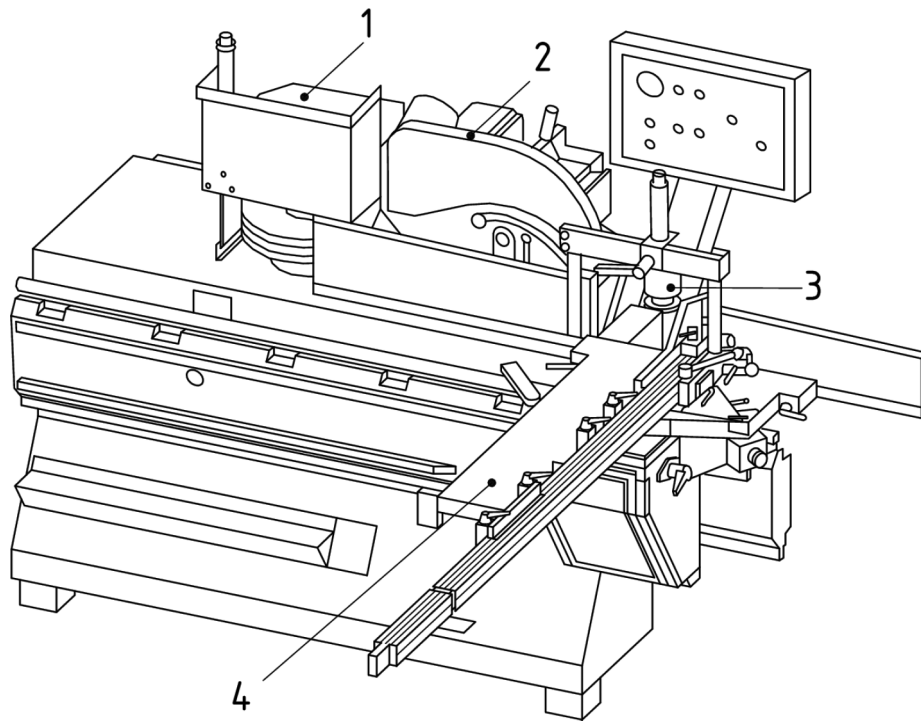
3.1

single-end tenoning machine with a manual feed sliding table

machine designed for the production of *tenons* (3.10) on one end of a workpiece during one cycle where the tenon is cut by means of milling tools and saw blades each mounted on its own spindle and with a manual feed sliding table supporting the workpiece during processing

Note 1 to entry: [Figure 1](#) illustrates an example of a single-end tenoning machine with a manual feed sliding table.

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**Key**

- 1 milling tool enclosure
- 3 workpiece clamping device
- 2 saw blade enclosure
- 4 manual feed sliding table

Figure 1 — Example of a single-end tenoning machine with a manual feed sliding table

3.2**single-end tenoning machine with a mechanical feed sliding table**

machine designed for the production of *tenons* (3.10) on one end of a workpiece during one cycle where the tenon is cut by means of milling tools and saw blades each mounted on its own spindle, with a mechanical feed sliding table and with one operator position for both loading and unloading

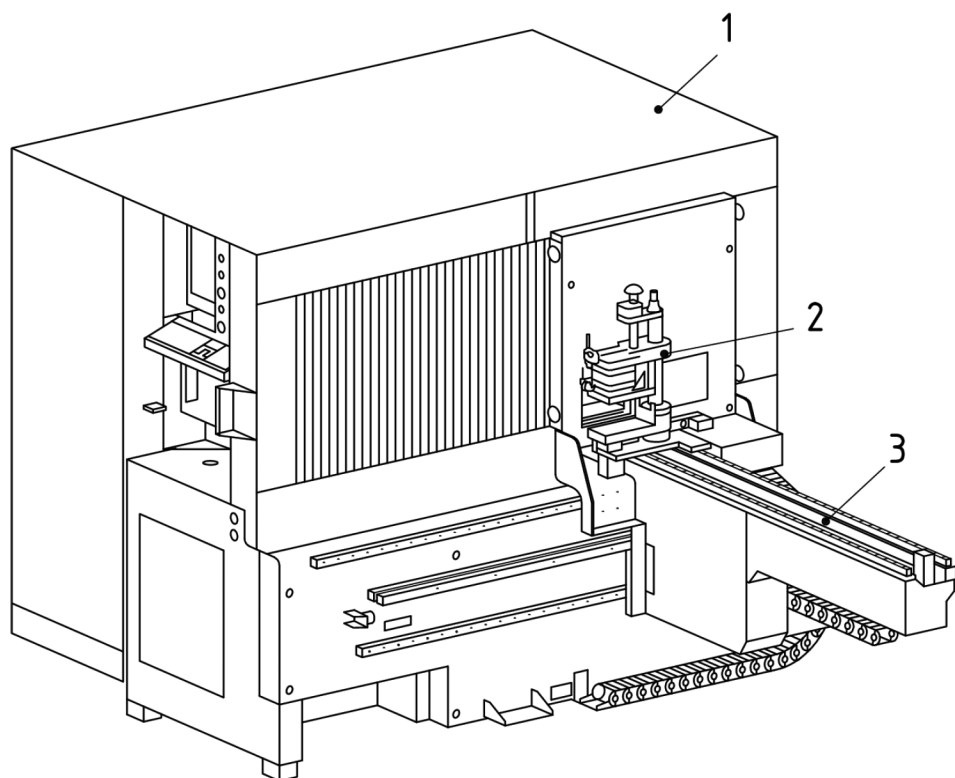
Note 1 to entry: [Figure 2](#) illustrates an example of a single-end tenoning machine with a mechanical feed sliding table.

3.3**single-end tenoning-profiling machine with mechanical feed**

machine designed for either producing *tenons* (3.10) or *profiling* (3.9), or both, on one side of the workpiece in one pass

Note 1 to entry: This machine is also known as “shaper-sander” or “shape and sand machine” (e.g. in North America). See [Figure 3](#) illustrates an example of a single-end tenoning-profiling machine with mechanical feed.

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**Key**

- 1 tools enclosure
- 3 mechanical feed sliding table
- 2 workpiece clamping device

Figure 2 — Example of a single-end tenoning machine with a mechanical feed sliding table

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