SLOVENSKI STANDARD
oSIST prEN ISO 19085-2:2026

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Lesnoobdelovalni stroji - Varnost - 2. del: Formatne horizontalne krožne žage za razrez plošč (ISO/DIS 19085-2:2026)

Woodworking machines - Safety - Part 2: Horizontal beam panel circular sawing machine (ISO/DIS 19085-2:2026)

Holzbearbeitungsmaschinen - Sicherheit - Teil 2: Horizontale Plattenkreissägemaschinen mit Druckbalken (ISO/DIS 19085-2:2026)

Machines à bois - Sécurité - Partie 2: Scies circulaires à panneaux horizontales à presseur (ISO/DIS 19085-2:2026)

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ICS:

13.110	Varnost strojev	Safety of machinery
25.080.60	Strojne žage	Sawing machines
79.120.10	Lesnoobdelovalni stroji	Woodworking machines

oSIST prEN ISO 19085-2:2026 **en,fr,de**

DRAFT International Standard

ISO/DIS 19085-2

Woodworking machines — Safety —

Part 2: Horizontal beam panel circular sawing machines

Machines à bois — Sécurité —

Partie 2: Scies circulaires à panneaux horizontales à presseur

ICS: 13.110; 79.120.10

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Foreword

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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).

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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 19085-2:2021), 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;

— requirements for another configuration have been added in 5.6.10, Figure 10 b), 7.3.2 c);

— 5.7 has been clarified and completed.

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 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.

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 DIS 19085-1:2026 or give specific requirements or both.

Woodworking machines — Safety —

Part 2: Horizontal beam panel circular sawing machines

1 Scope

This document specifies the safety requirements and measures for horizontal beam panel circular sawing machines with the saw carriage of the front cutting line mounted below the workpiece support, which are manually or powered loaded or both and manually unloaded, capable of continuous production use, as defined in 3.1 and hereinafter referred to also 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. Also, transport, assembly, adjustment, maintenance, dismantling, disabling and scrapping phases have been taken into account.

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:

— side pressure device;

— device for powered unloading;

— unit for scoring;

— unit for post-formed/soft-formed edge pre-cutting;

— panel turning device;

— front side turn table;

— pushing out device;

— pneumatic clamping of the saw blade;

— powered panel loading device;

— device for grooving by milling tool;

— one or more additional cutting lines inside the machine for longitudinal or head cut or both (before the transversal cutting line);

— workpiece vacuum clamping as part of a front side turn table or of a panel loading device;

— panel pusher;

— independent panel pushers;

— additional panel pushers mounted on the panel pusher carriage;

— additional panel pusher with integrated label printer device;

— lifting platform;

— device for automatic loading of thin panels;

— device for base board unloading by gravity;

— device for base board powered unloading;

— device for panel unloading in limited space condition;

— loading or pre-loading roller conveyors;

— pressure beam with additional flaps to increase dust extraction efficiency;

— saw blade cooling system by air or water-air or oil-air;

— vibrating conveyor with/without trimming unit for offcuts management;

— predisposition for top loading/unloading by an external system directly on the machine table or on the machine preloading roller conveyor or on the machine lifting table.

NOTE base board is a support panel underlying the panel stack, to protect the panels from damages during transportation.

The machines are designed for cutting panels consisting of:

a) solid wood;

b) material with similar physical characteristics to wood (see ISO DIS 19085-1:2026, 3.2);

c) gypsum boards, gypsum bounded fibreboards;

d) composite materials, with core consisting of e.g. polyurethane or mineral material, laminated with light alloy;

e) cardboard;

f) foam board;

g) matrix engineered mineral boards, silicate boards;

h) polymer-matrix composite materials and reinforced thermoplastic/thermoset/elastomeric materials;

i) aluminium light alloy plates with a maximum thickness of 10 mm;

j) composite boards made from the materials listed above.

This document does not deal with hazards related to:

— specific features different from those listed above;

— the machining of panels with milling tools for grooving;

— powered unloading of panels;

— rear half of split pressure beam on the front cutting line;

— the combination of a single machine being used with any other machine (as part of a line).

This document is not applicable to:

— machines intended for use in potentially explosive atmospheres;

— machines manufactured prior to the date of 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 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction*

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

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

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

ISO 14118:2017, *Safety of machinery — Prevention of unexpected start-up*

ISO 19085-1:2026, *Woodworking machines — Safety — Part-1: common requirements*

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
horizontal beam panel circular sawing machine
machine designed for cutting panels, fitted with one travelling *saw carriage* (3.4) per cutting line incorporating one or more circular saw blades, with horizontal workpiece support and with a *pressure beam* (3.5) holding the workpiece in position during cutting

Note 1 to entry: The workpiece can be mechanically positioned by a *panel pusher* (3.6) for the cuts. The cutting stroke is power driven. Before the cutting stroke commences, the saw blade is automatically raised and is lowered below the workpiece support for the return stroke. Examples are shown in Figure 1.

3.2
manual loading
operation where the operator puts the workpiece directly on the workpiece support from the front side of the machine, or onto an intermediate loading device that cannot keep the operator away from the machine front cutting line of at least 1 500 mm during operation

3.3
manual unloading
operation where the operator removes the workpiece directly from the workpiece support, or from an intermediate unloading device that cannot keep the operator away from the machine front cutting line of at least 1 500 mm during operation

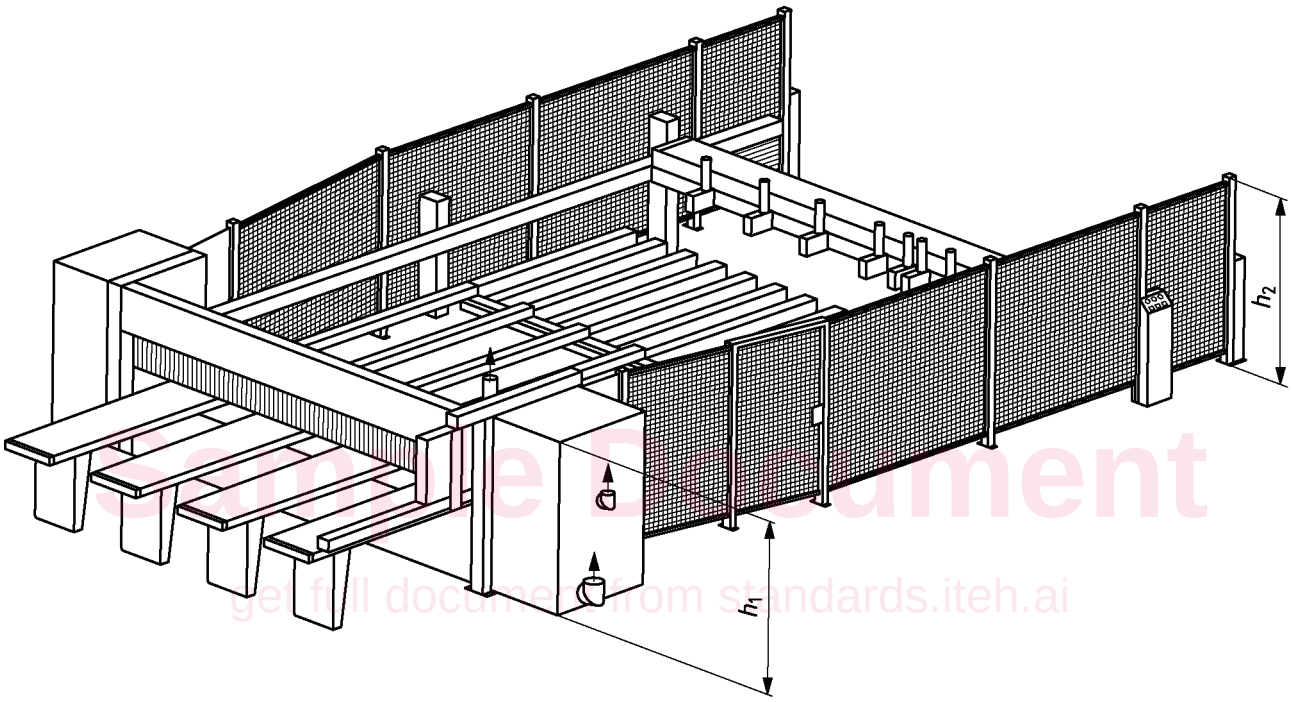
3.4
saw carriage
supporting unit of the saw blades, which performs the cutting stroke

3.5
pressure beam
workpiece clamping device extending across the full working width of the machine with the function to hold the workpiece down to the workpiece support during cutting

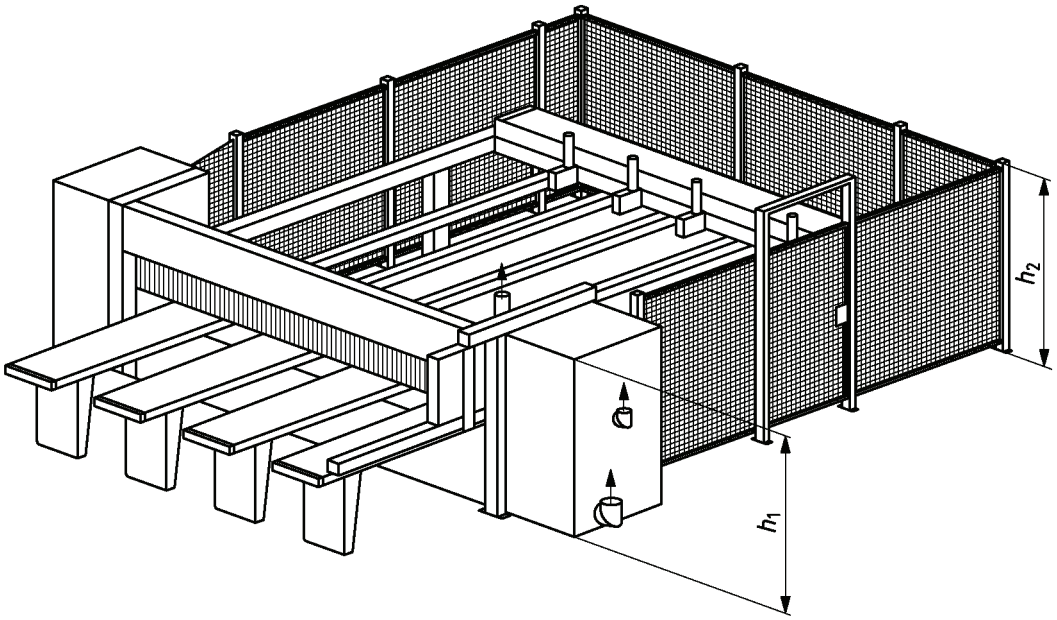
Note 1 to entry: The pressure beam is also part of the safeguarding of the saw blades in the cutting area.

3.6
panel pusher
movable workpiece guiding device used to position the workpiece over the line of cut, and fitted with holding devices e.g. collets for holding the workpiece in position

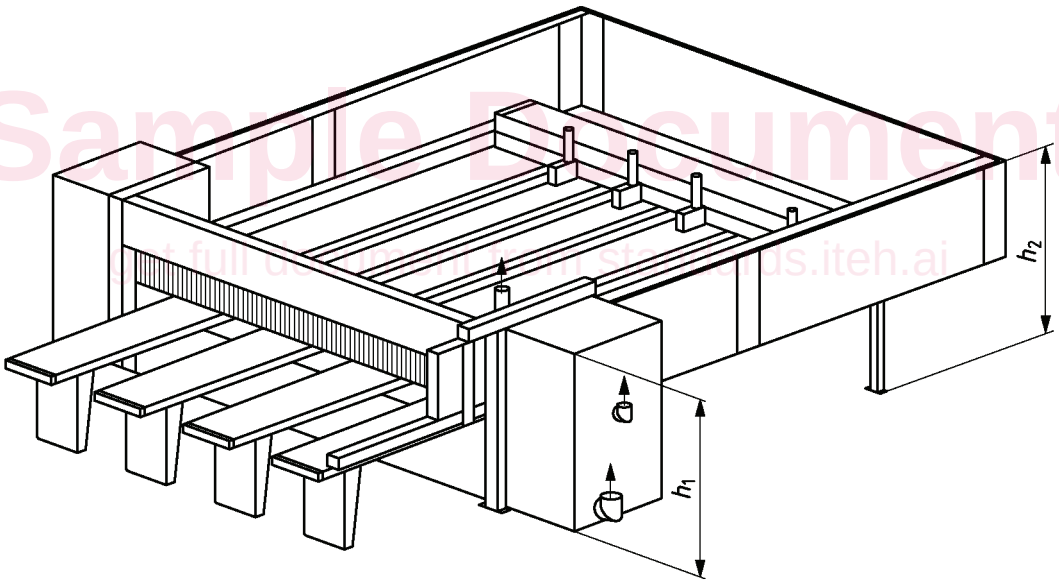
Note 1 to entry: The positioning of the panel pusher can be under NC control.



a) Example of a machine with panel pusher and panel loading from the rear side by a powered loading device and with perimeter fence and light barrier



b) Example of a machine with panel pusher and panel loading from the front side and perimeter fence



c) Example of a machine with panel pusher and panel loading from the front and with distance guards mounted on the machine frame