SLOVENSKI STANDARD
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Lesnoobdelovalni stroji - Varnost - Krožne žage - 21. del: Dvolistne krožne žage za prečni rez z vgrajenim podajalnikom

Woodworking machines - Safety - Part 21: Double blade circular sawing machines for cross-cutting with integrated feed (ISO/DIS 19085-21:2024)

Sicherheit von Holzbearbeitungsmaschinen - Kreissägemaschinen - Teil 9: Doppelgehrungskreissägemaschinen mit mechanischem Vorschub und Handbeschickung und/oder Handentnahme

Machines à bois - Sécurité - Partie 21: Machines à scier à deux lames de scie circulaires pour tronçonnage avec avance mécanisée (ISO/DIS 19085-21:2024)

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ISO/DIS 19085-21

Woodworking machines — Safety —

Part 21: Double blade circular sawing machines for cross-cutting with integrated feed

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

This document replaces EN 1870-9:2012, which has been technically revised.

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 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 12100:2010.

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 (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, for example, 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 12100:2010), 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 the ISO 19085 series 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 the ISO 19085 series.

As far as possible, the safety requirements of parts of the ISO 19085 series refer to the relevant clauses of ISO 19085-1:2021. Each part includes replacements and additions to the common requirements given in ISO 19085-1:2021.

All parts of the ISO 19085 series have the same structure, so that reference to ISO 19085-1:2021 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.

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.”.

Woodworking machines — Safety —

Part 21: Double blade circular sawing machines for cross-cutting with integrated feed

1 Scope

This document specifies the safety requirements and measures for double blade circular sawing machines for cross-cutting with integrated feed of the cutting-stroke, 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 as well as:

— aluminium profiles also filled or composed with plastic or foam or rubber based insulating materials;

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

— polymer-matrix composite materials and reinforced with thermoplastic or thermoset or elastomeric materials;

— fibreglass;

— composite bars made from the materials listed above.

This document 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.

This document does not apply to:

a) machines for cross-cutting logs;

b) machines intended for use in potentially explosive atmosphere;

c) machines manufactured prior to the publication of this document.

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*

ISO 13855:2010, *Safety of machinery — Positioning of safeguards with respect to the approach speeds of parts of the human body*

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*

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 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
double blade circular sawing machine for cross-cutting with integrated feed
machine fitted with two sawing heads, each with one sawing unit for cross-cutting with power-operated *cutting stroke* (3.3), where the workpiece is stationary during cutting

Note 1 to entry: One or both sawing heads (see Figure 1, key 1 and 2) can be manually or power-operated moveable for horizontal positioning.

Note 2 to entry: The saw units (see Figure 1, key 3) can be manually or power-operated tilted or pivoted or both.

Note 3 to entry: The workpiece can be manually or automatically positioned for cutting to pre-selected lengths.

3.2
workpiece positioning mechanism
mechanism using the clamping system and the power-operated horizontal positioning capability of a movable saw unit to feed the workpiece to the intended position for cross cutting to the desired length

Note 1 to entry: The workpiece positioning mechanism can be used, for example, to allow processing workpieces longer or shorter respectively than the maximum or minimum distance between the saw units.

Note 2 to entry: When the workpiece positioning mechanism is used, usually only one saw blade is operating during the cutting stroke.

3.3
cutting stroke
feed movement of the saw unit incorporating the tool to perform the cut immediately followed by the return of the saw unit to its *rest position* (3.7)

Note 1 to entry: The cutting stroke can be downward, horizontal or upward. See Figure 1 a) for a manual machine with downward cutting stroke, where only the saw unit feed for the cutting stroke is power-operated, Figure 1 b) for a fully power-operated machine with horizontal cutting stroke, and Figure 1 c) for a fully power-operated machine with upward cutting stroke.

3.4
cutting cycle
<automatic machines> automatic sequence of movements of one or both sawing heads for positioning to pre-selected lengths, of the saw units for positioning to pre-selected angles and inclinations, and *cutting stroke* (3.3)

Note 1 to entry: More cutting cycles can be repeated automatically if pre-selected.

Note 2 to entry: see Figure 1 d) for an example of an automatic machine.