ICS 13.110, 79.120.10 SLOVENSKÁ TECHNICKÁ NORMA September 2018

STN	**Drevárske stroje Bezpečnosť Časť 4: Zvislé kotúčové formátovacie píly (ISO 19085-4: 2018)**	**STN EN ISO 19085-4** 49 6115

Woodworking machines - Safety - Part 4: Vertical panel circular sawing machines (ISO 19085-4:2018)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/18

Obsahuje: EN ISO 19085-4:2018, ISO 19085-4:2018

127136

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 19085-4

April 2018

ICS 13.110; 79.120.10

English Version

Woodworking machines - Safety - Part 4: Vertical panel circular sawing machines (ISO 19085-4:2018)

Machines à bois - Sécurité - Partie 4: Scies circulaires à panneaux verticales (ISO 19085-4:2018)

Holzbearbeitungsmaschinen - Sicherheit - Teil 4: Vertikalplattenkreissägemaschinen (ISO 19085-4:2018)

This European Standard was approved by CEN on 27 March 2018.

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Ref. No. EN ISO 19085-4:2018 E

EN ISO 19085-4:2018 (E)

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Annex ZA (informative) **Relationship between this European standard and the essential requirements of EU Directive 2006/42/EC** **4**

European foreword

This document (EN ISO 19085-4:2018) has been prepared by Technical Committee ISO/TC 39 “Machine tools” in collaboration with Technical Committee CEN/TC 142 “Woodworking machines - Safety” the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2018, and conflicting national standards shall be withdrawn at the latest by October 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 19085-4:2018 has been approved by CEN as EN ISO 19085-4:2018 without any modification.

Annex ZA
(informative)

Relationship between this European standard and the essential requirements of EU Directive 2006/42/EC

This European standard has been prepared under a Commission's standardization request "M/396" to provide one voluntary means of conforming to *essential requirements of the new approach* Machinery Directive 2006/42.

Once this standard is cited in the Official Journal of the European Union under that *Directive*, compliance with the normative clauses of this standard given in Table ZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding *essential* requirements of that *Directive*, and associated EFTA regulations.

Table ZA.1 — Correspondence between this European standard and Directive 2006/42/EC

Essential Requirements (ERs) of Directive 2006/42/EC	Clause(s)/subclause(s) of this European standard	Remarks/Notes
1.1.2 Principles of safety integration		
a) fitted for its function	Clauses 5, 6, 7, 8	
b) eliminate or reduce the risks, give measures, inform	Clauses 5, 6, 7, 8	
c) intended use and reasonably foreseeable misuse	Clauses 5, 6, 7, 8	
d) constraints in use	7.5, 8.3	
e) equipment	6.1, 8.3	
1.1.3 Materials and products	6.2, 7.3	
1.1.4 Lighting	8.3	
1.1.5 Design of machinery to facilitate its handling	7.5	
1.1.6 Ergonomics	7.5	
1.1.7 Operating position	5.2	
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1.2.2 Control devices	5.2, 5.3, 5.4, 5.7	
1.2.3 Starting	5.3	
1.2.4 Stopping	5.4, 5.5, 6.4	
1.2.4.1 Normal stop	5.4.2	
1.2.4.2 Operational stop	5.4.3	
1.2.4.3 Emergency stop	5.4.4	
1.2.6 Failure of the power supply	5.8, 7.7	

Essential Requirements (ERs) of Directive 2006/42/EC	Clause(s)/subclause(s) of this European standard	Remarks/Notes
1.2.8 Software	5.1	
1.3.1 Risk of loss of stability	6.1, 8.3	
1.3.2 Risk of break-up during operation	6.2, 8.3	
1.3.3 Risks due to falling or ejected objects	6.2, 6.3, 6.5, 6.9, 8.3	
1.3.4 Risk due to surfaces, edges or angles		Not significant, see ISO 12100:2010
1.3.6 Risks relating to variations in the operating conditions	5.7, 6.6	
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Essential Requirements (ERs) of Directive 2006/42/EC	Clause(s)/subclause(s) of this European standard	Remarks/Notes
1.7.1 Information and warnings on the machinery	7.10, 8.1, 8.2	
1.7.2 Warning devices	7.10, 8.1	
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c) brake	5.5, 6.4	
d) accidental tool contact	6.6.2, 8.2.2, 8.3	

WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

INTERNATIONAL STANDARD

ISO 19085-4

First edition
2018-02

Woodworking machines — Safety —

Part 4: Vertical panel circular sawing machines

Machines à bois — Sécurité —

Partie 4: Scies circulaires à panneaux verticales

Reference number
ISO 19085-4:2018(E)

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Published in Switzerland

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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 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 on 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 the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 39, *Machine tools*, Subcommittee SC 4, *Woodworking machines*.

This document is intended to be used in conjunction with ISO 19085-1, which gives requirements common to different machine types.

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

Introduction

The ISO 19085 series of International Standards provides technical safety requirements for the design and construction of woodworking machinery. It concerns designers, manufacturers, suppliers and importers of the machines specified in the Scope. It also includes a list of informative items to be provided to the user by the manufacturer.

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

The machinery concerned and the extent to which hazards, hazardous situations or hazardous events are covered are indicated in the Scope.

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.

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 19085-1:2017, to the extent specified in the Scope of the applicable part of ISO 19085.

As far as possible, in parts of ISO 19085 other than ISO 19085-1:2017, safety requirements are referenced to the relevant sections of ISO 19085-1:2017, to avoid repetition and reduce their length. The other parts contain replacements and additions to the common requirements given in ISO 19085-1:2017.

Thus, Clauses 5, 6, 7 and 8 with their subclauses and the annexes of this document can either

— confirm as a whole,

— confirm with additions,

— exclude in total, or

— replace with specific text

the corresponding subclauses or annexes of ISO 19085-1:2017.

This interrelation is indicated in the first paragraph of each subclause or annex right after the title by one of the following possible statements:

— “This subclause of ISO 19085-1:2017 applies.”;

— “This subclause of ISO 19085-1:2017 applies with the following additions.” or “This subclause of ISO 19085-1:2017 applies with the following additions, subdivided into further specific subclauses.”;

— “This subclause of ISO 19085-1:2017 does not apply.”;

— “This subclause of ISO 19085-1:2017 is replaced by the following text.” or “This subclause of ISO 19085-1:2017 is replaced by the following text, subdivided into further specific subclauses.”.

Specific subclauses and annexes in this document without correspondent in ISO 19085-1:2017 are indicated by the introductory sentence: “Subclause (or Annex) specific to this part of ISO 19085.”.

Clauses 1, 2 and 4 replace the correspondent clauses of ISO 19085-1:2017, with no need for indication since they are specific to each part of the series.

NOTE Requirements for tools are given in EN 847-1:2013.

INTERNATIONAL STANDARD **ISO 19085-4:2018(E)**

Woodworking machines — Safety —

Part 4: Vertical panel circular sawing machines

1 Scope

This document gives the safety requirements and measures for manually loaded and unloaded stationary vertical panel sawing machines, hereinafter referred to as “machines”.

NOTE 1 In manual loading, the operator puts the work-piece directly onto the work-piece support, with no intermediate loading device to receive and transfer the work-piece from the operator to the cutting position. In manual unloading, the operator removes the work-piece directly from the work-piece support, with no intermediate unloading device to transfer the work-piece from the cutting position to the operator.

It deals with all significant hazards, hazardous situations and events as listed in Clause 4 relevant to machines, when operated, adjusted and maintained as intended and under the conditions foreseen by the manufacturer including reasonably foreseeable misuse. Also, transport, assembly, dismantling, disabling and scrapping phases are taken into account.

NOTE 2 For relevant but not significant hazards, e.g. sharp edges of the machine frame, see ISO 12100:2010.

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

— an integrated feed device;

— a device for scoring;

— an angle cutting device;

— a middle support device;

— programmable end stops for parallel vertical cuts;

— a device for grooving with a width of at most 20 mm in one pass by using a milling tool; and

— a panel pusher.

The machines are designed for cutting panels consisting of:

a) solid wood;

b) material with similar physical characteristics to wood (see ISO 19085-1:2017, 3.2);

c) composite materials with core consisting, for example, of polyurethane or mineral material laminated with light alloy;

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

e) gypsum boards, gypsum bounded fibreboards.

This document does not apply to machines

— with pressure beam and saw unit mounted behind the work-piece support;

— where the guide rails on which the saw unit moves vertically are fixed on the machine frame and the horizontal cut can only be made by manually feeding the panel;

— designed to cut in vertical direction only;

— which are displaceable;

— automatically performing two or more cutting cycles in sequence;

— intended for use in potentially explosive atmosphere; and

— manufactured before 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 7960:1995, *Airborne noise emitted by machine tools — Operating conditions for woodworking machines*

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

ISO 13849-1:2015, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design*

ISO 13857:2008, *Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs*

ISO 19085-1:2017, *Woodworking machines — Safety — Part 1: Common requirements*

EN 847-1:2013, *Tools for woodworking — Safety requirements — Part 1: Milling tools, circular saw blades*