

Drevárske stroje Bezpečnosť Časť 7: Zrovnávacie, hrúbkovacie a kombinované zrovnávacie/hrúbkovacie frézovačky (ISO 19085-7: 2019)

STN EN ISO 19085-7

49 6115

Woodworking machines - Safety - Part 7: Surface planing, thickness planing, combined surface/thickness planing machines (ISO 19085-7:2019)

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. 12/19

Obsahuje: EN ISO 19085-7:2019, ISO 19085-7:2019

Oznámením tejto normy sa ruší STN EN 859+A2 (49 6126) z februára 2013

STN EN 860+A2 (49 6111) z februára 2013

STN EN 861+A2 (49 6112) z marca 2013

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN ISO 19085-7

July 2019

ICS 13.110; 79.120.10

Supersedes EN 859:2007+A2:2012, EN 860:2007+A2:2012, EN 861:2007+A2:2012

English Version

Woodworking machines - Safety - Part 7: Surface planing, thickness planing, combined surface/thickness planing machines (ISO 19085-7:2019)

Machines à bois - Sécurité - Partie 7: Machines à dégauchir, à raboter et machines combinées à dégauchir/raboter (ISO 19085-7:2019)

Holzbearbeitungsmaschinen - Sicherheit - Teil 7: Abrichthobel-, Dickenhobel-, kombinierte Abricht- und Dickenhobelmaschinen (ISO 19085-7:2019)

This European Standard was approved by CEN on 10 May 2019.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN ISO 19085-7:2019 (E)

Contents	Page
European foreword	3
Annex ZA (informative) Relationship between this European Standard and the essential	
requirements of Directive 2006/42/EC aimed to be covered	4

European foreword

This document (EN ISO 19085-7:2019) 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 January 2020, and conflicting national standards shall be withdrawn at the latest by January 2020.

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 supersedes EN 859:2007+A2:2012, EN 861:2007+A2:2012 and EN 860:2007+A2:2012.

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 the 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 organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 19085-7:2019 has been approved by CEN as EN ISO 19085-7:2019 without any modification.

Annex ZA

(informative)

Relationship between this European Standard and the essential requirements of Directive 2006/42/EC aimed to be covered

This European Standard has been prepared under a Commission's standardisation request "M/396 Mandate to CEN and Cenelec for standardisation in the field of machinery" to provide one voluntary means of conforming to essential requirements of Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery.

Once this standard is cited in the Official Journal of the European Union under that Directive 2006/42/EC, 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 2006/42/EC, 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 EN	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	
1.2.1 Safety and reliability of control systems	5.1, 5.7, 5.8, 5.10, 5.12, 5.13, 6.5, 7.7, 7.8	
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	
1.2.4.3 Emergency stop	5.4.4	

EN ISO 19085-7:2019 (E)

1.2.6 Failure of the power supply	5.8, 7.7	
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, 6.8, 6.9, 8.3	
1.3.4 Risk due to surfaces, edges or angles		Not significant, see ISO 12100:2010
1.3.5 Risk related to combined machines	6.6.2	
1.3.6 Risks relating to variations in the operating conditions	5.7, 6.6	
1.3.7 Risks related to moving parts	6.5, 6.6, 6.7, 8.3	
1.3.8 Choice of protection against risks related to moving parts	6.6, 6.7, 6.8	
1.3.8.1 Moving transmission parts	6.6.3	
1.3.8.2 Moving parts involved in the process	6.6.2	
1.3.9 Risk of uncontrolled movements	6.1.1	
1.4.1 General requirements	6.9	
1.4.2.1 Fixed guards	6.5.1	
1.4.2.2 Interlocking moveable guards	6.5.2	
1.4.2.3 Adjustable guards restricting access	6.6.2	
1.5.1 Electricity supply	7.4, 7.13	
1.5.2 Static electricity	7.11	
1.5.3 Energy supply other than electricity	7.7, 7.8	
1.5.4 Errors of fitting	7.12	
1.5.6 Fire	7.1	
1.5.8 Noise	7.2	
1.5.11 External radiation	7.9	
1.5.13 Emission of hazardous materials and substances	7.3	
1.6.1 Machinery maintenance	7.14, 8.3	
1.6.2 Access to operating position and servicing points	7.14, 8.3	
1.6.3 Isolation of energy sources	7.13, 8.3	
1.6.4 Operator intervention	7.14, 8.3	

EN ISO 19085-7:2019 (E)

1.6.5 Cleaning of internal parts	7.14, 8.3	
1.7.1 Information and warnings on the machinery	8.1, 8.2	
1.7.2 Warning devices	8.1	
1.7.3 Marking of machinery	8.2	
1.7.4 Instructions	8.3	
2.3 Machinery for working wood and analogous materials		
a) guiding	6.10, 6.11	
b) ejection	6.2, 6.3, 6.5, 6.6, 6.8, 6.9, 8.3	
c) brake	5.5, 6.4	
d) accidental tool contact	6.6.2, 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 19085-7

First edition 2019-06

Woodworking machines — Safety —

Part 7:

Surface planing, thickness planing, combined surface/thickness planing machines

Machines à bois — Sécurité —

Partie 7: Machines à dégauchir, à raboter et machines combinées à dégauchir/raboter



ISO 19085-7:2019(E)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2019

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Fax: +41 22 749 09 47 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

Coı	Contents		
Fore	word		v
Intr	oduction		vi
1	Scope		1
2	-	ative references	
3		and definitions	
4		significant hazards	
5		requirements and measures for controls	
	5.1 5.2	Safety and reliability of control systems	
	5.2	Control devices Start	
	5.3 5.4	Safe stops	
	5.1	5.4.1 General	
		5.4.2 Normal stop	
		5.4.3 Operational stop	12
		5.4.4 Emergency stop	
	5.5	Braking function of tool spindles	
	5.6	Mode selection	
	5.7	Spindle speed changing by changing belts on the pulleys	
		5.7.1 Spindle speed changing by changing belts on the pulleys5.7.2 Spindle speed changing by incremental speed change motor	
		5.7.2 Springle speed changing by incremental speed change motor	
	5.8	Failure of any power supply	
	5.9	Manual reset control	
	5.10	Enabling control	
	5.11	Machine moving part speed monitoring	
	5.12	Time delay	
	5.13	Power-operated adjustment of tables	
6		requirements and measures for protection against mechanical hazards	
	6.1	Stability	
		6.1.1 Stationary machines 6.1.2 Displaceable machines	
	6.2	Risk of break-up during operation	
	6.3	Tool holder and tool design	
		6.3.1 General	
		6.3.2 Spindle locking	
		6.3.3 Circular saw blade fixing device	
		6.3.4 Flange dimension for circular saw blades	
	6.4	Braking CA1 Probing of to all onin dlag	
		6.4.1 Braking of tool spindles 6.4.2 Maximum run-down time	
		6.4.3 Brake release	
	6.5	Safeguards	
		6.5.1 Fixed guards	
		6.5.2 Interlocking moveable guards	
		6.5.3 Hold-to-run control	
		6.5.4 Two-hand control	
		6.5.5 Electro-sensitive protective equipment (ESPE)	
	6.6	6.5.6 Pressure sensitive protective equipment (PSPE)	
	0.0	Prevention of access to moving parts	
		6.6.2 Guarding of tools	
		6.6.3 Guarding of drives	

ISO 19085-7:2019(E)

	6.7	6.6.4 Guarding of shearing and/or crushing zones Impact hazard	19
	6.8	Clamping devices	
	6.9	Measures against ejection	
		6.9.1 General	
		6.9.2 Guards material and characteristics	20
		6.9.3 Anti-kickback devices	
	6.10	Work-piece supports and guides	
		6.10.1 General	
		6.10.2 Surface planing tables	
		6.10.3 Thicknessing table	
		6.10.4 Mortising table	
		6.10.5 Work-piece guiding during surface planing	
	6.11	Safety appliances	
_			
7		y requirements and measures for protection against other hazards	
	7.1 7.2	Fire	
	1.2	Noise	
		7.2.1 Noise reduction at the design stage	
	7.3	Emission of chips and dust	
	7.4	Electricity	
		7.4.1 General	
		7.4.2 Displaceable machines	
	7.5	Ergonomics and handling	
	7.6	Lighting	
	7.7	Pneumatics	
	7.8	Hydraulics	
	7.9	Electromagnetic compatibility	
	7.10	Laser	
	7.11	Static electricity	
	7.12 7.13	Errors of fittingIsolation	
	7.13 7.14	Maintenance	
_			
3		mation for use	
	8.1	Warning devices	
	8.2	Marking	
		8.2.1 General 8.2.2 Additional markings	
	8.3	Instruction handbook	
	0.5	8.3.1 General	
		8.3.2 Additional information	
1 nno	v A (inf	ormative) Performance levels required	
	•	-	
Anne	x B (no	rmative) Test for braking function	31
		rmative) Stability test for displaceable machines	
Anne	x D (no	rmative) Impact test for guards	35
Anne	x E (no	rmative) Noise emission measurement for machines not in ISO 7960:1995	36
	•	rmative) Tests for bridge-type guards	
		rmative) Surface planing machines table lips resistance test	
\nne	x H (no	rmative) Kickback test	42
Riblia	ngranh	V.	43

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*.

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.

This document is intended to be used in conjunction with ISO 19085-1:2017, 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 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 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.

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 statements:

- "ISO 19085-1:2017, [subclause/Annex], applies.";
- "ISO 19085-1:2017, [subclause/Annex], applies with the following additions." or "ISO 19085-1:2017, [subclause/Annex], applies with the following additions, subdivided into further specific subclauses.";
- "ISO 19085-1:2017, [subclause/Annex], does not apply.";
- "ISO 19085-1:2017, [subclause/Annex], is replaced by the following text." or "ISO 19085-1:2017, [subclause/Annex], 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/Annex specific to this document.".

<u>Clauses 1</u>, <u>2</u>, <u>4</u> 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 847-1:2017.

INTERNATIONAL STANDARD

Woodworking machines — Safety —

Part 7:

Surface planing, thickness planing, combined surface/ thickness planing machines

1 Scope

This document gives the safety requirements and measures for stationary and displaceable

- surface planing machines, also called jointers,
- thickness planing machines, also called planers or single surface planers,
- combined surface/thickness planing machines

with fixed cutterblock position, with an integrated feed in thicknessing mode, with or without demountable power feed device in planing mode and with manual loading and unloading of the workpiece, hereinafter referred to as "machines". The machines are designed to cut solid wood and material with similar physical characteristics to wood.

NOTE 1 For the definitions of stationary and displaceable machines, see ISO 19085-1:2017, 3.4 and 3.5.

It deals with all significant hazards, hazardous situations and events as listed in <u>Clause 4</u> relevant to these machines when they are 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.

It is also applicable to surface planing machines and combined surface/thickness planing machines fitted with an optional mortising device, whose hazards have been dealt with.

This document does not apply to:

- a) machines with more than one cutterblock;
- b) machines with mortising unit driven by a separate motor;
- c) machines where the cutterblock is adjustable for depth of cut setting in thicknessing mode;
- d) machines where the conversion from planing to thicknessing mode or vice versa is achieved by mounting or demounting parts/units;
- e) machines where surfacing and thicknessing can be performed on the same section of the cutterblock at the same time:
- f) machines intended for use in potentially explosive atmosphere;
- g) machines manufactured before the date of its publication as an international standard;
- h) displaceable machines with a maximum planing width of \leq 330 mm.

NOTE 3 Transportable motor-operated electric tools are dealt with in IEC 62841-1:2014 and IEC 61029-2-3:1993.

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

 ${\tt ISO~12100:2010}, \textit{Safety of machinery} - \textit{General principles for design} - \textit{Risk assessment and risk reduction}$

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

koniec náhľadu – text ďalej pokračuje v platenej verzii STN