

SLOVENSKI STANDARD SIST EN ISO 19085-4:2018

01-oktober-2018

Lesnoobdelovalni stroji - Varnost - 4. del: Krožne žage z vertikalno ploščo (ISO 19085-4:2018)

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

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

Machines pour le travail du bois - Prescriptions de sécurité - Partie 4: Scies à panneaux verticales (ISO 19085-4:2018)

https://standards.iteh.ai/catalog/standards/sist/1cdbd17d-3dd0-4b4d-925a-

Ta slovenski standard je istoveten z: EN ISO 19085-4-2018

ICS:

25.080.60 Strojne žage Sawing machines

79.120.10 Lesnoobdelovalni stroji Woodworking machines

SIST EN ISO 19085-4:2018 en

SIST EN ISO 19085-4:2018

iTeh STANDARD PREVIEW (standards.iteh.ai)

ee8cb9347969/sist-en-iso-19085-4-2018

<u>SIST EN ISO 19085-4:2018</u> https://standards.iteh.ai/catalog/standards/sist/1cdbd17d-3dd0-4b4d-925aEUROPEAN STANDARD NORME EUROPÉENNE EN ISO 19085-4

EUROPÄISCHE NORM

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.

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, 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 United Kingdom.

ee8cb9347969/sist-en-iso-19085-4-2018



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 19085-4:2018 (E)

European foreword	3
Annex ZA (informative) Relationship between this European standard and the essential requirements of EU Directive 2006/42/EC	

iTeh STANDARD PREVIEW (standards.iteh.ai)

<u>SIST EN ISO 19085-4:2018</u> https://standards.iteh.ai/catalog/standards/sist/1cdbd17d-3dd0-4b4d-925a-ee8cb9347969/sist-en-iso-19085-4-2018

EN ISO 19085-4:2018 (E)

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.

SIST EN ISO 19085-4:2018

https://standards.iteh.ai/c**Endorsement**lnioticel0-4b4d-925a-ee8cb9347969/sist-en-iso-19085-4-2018

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 iTeh STA	Clauses 5, 6, 7, 8 REVIEW	
b) eliminate or reduce the risks (sive) measures, inform	Clauses 5,6,7,8h.ai)	
c) intended use and reasonably foreseeable https://standards.iteh.ai/cat	Clauses 5, 6, 74, 8018 alog/standards/sist/1cdbd17d-3dd0-4b4d-925 7969/sist_en_iso_19085-4_2018	1-
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	
1.2.1 Safety and reliability of control systems	5.1, 5.7, 5.8, 5.9, 5.11, 5.12, 6.5, 7.7	
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	
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	6.6.1, 6.6.3, 6.6.4, 6.7	
1.3.8.2 Moving parts involved in the process	6.6.1, 6.6.2	
1.3.9 Risk of uncontrolled movements	6.1.1	
1.4.1 General requirements STANDA	AD PREVIEW	
1.4.2.1 Fixed guards (standar	d5.iteh.ai)	
1.4.2.2 Interlocking movable guards	6.5.2	
1.4.3 Special requirements for protective devices ee8cb9347969/sist	19083-42018 1908/3219-515d 975-9dd0-4b4d-925a- -en-iso-19085-4-2018	
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	
1.5.12 Laser equipment	7.10	
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	
1.6.5 Cleaning of internal parts	7.14, 8.3	

EN ISO 19085-4:2018 (E)

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	
1.7.3 Marking of machinery	8.2	
1.7.4 Instructions	7.10, 8.3	
2.3 Machinery for working wood and analogous materials		
a) guiding	6.10	
b) ejection	6.2, 6.3, 6.5, 6.9, 8.3	
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.

<u>SIST EN ISO 19085-4:2018</u> https://standards.iteh.ai/catalog/standards/sist/1cdbd17d-3dd0-4b4d-925a-ee8cb9347969/sist-en-iso-19085-4-2018 SIST EN ISO 19085-4:2018

INTERNATIONAL STANDARD

ISO 19085-4

First edition 2018-02

Woodworking machines — Safety —

Part 4: **Vertical panel circular sawing machines**

Machines à bois — Sécurité —

iTeh STPartie 4: Scies circulaires à panneaux verticales (standards.iteh.ai)

SIST EN ISO 19085-4:2018 https://standards.iteh.ai/catalog/standards/sist/1cdbd17d-3dd0-4b4d-925a-ee8cb9347969/sist-en-iso-19085-4-2018



Reference number ISO 19085-4:2018(E)

ISO 19085-4:2018(E)

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN ISO 19085-4:2018 https://standards.iteh.ai/catalog/standards/sist/1cdbd17d-3dd0-4b4d-925a-ee8cb9347969/sist-en-iso-19085-4-2018



COPYRIGHT PROTECTED DOCUMENT

© ISO 2018

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

Co	ntents		Page
Fore	eword		v
Intr	oduction		vi
1			
	-		
2	Norm	ative references	2
3	Terms	s and definitions	2
4	List of	f significant hazards	5
5		requirements and measures for controls	
	5.1	Safety and reliability of control systems	
	5.2	Control devices	
	5.3	Start	
	5.4	Safe stops	
		5.4.1 General	
		5.4.2 Normal stop	
		5.4.3 Operational stop	
		5.4.4 Emergency stop	
	5.5	Braking function of tool spindles	
	5.6 5.7	Mode selection	
	3.7	5.7.1 Spindle speed changing by changing belts on the pulleys	9 0
		5.7.2 Spindle speed changing by incremental speed change motor	9
		5.7.3 Infinitely variable speed by frequency inverter	9
	5.8	5.7.3 Infinitely variable speed by frequency inverter	9
	5.9	Manual reset control	9
	5.10	Enabling control SISTEN ISO 19085-4:2018	9
	5.11	Manual reset control Enabling control Machine moving parts speed monitoring cdbd17d-3dd0-4b4d-925a- ee8cb9347969/sist-en-iso-19085-4-2018 Time delay	9
	5.12	Time delay ————————————————————————————————————	10
6	Safety	requirements and measures for protection against mechanical hazards	10
	6.1	Stability	
		6.1.1 Stationary machines	
	6.0	6.1.2 Displaceable machines	
	6.2	Risk of break-up during operation	
	6.3	Tool holder and tool design	
		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	
		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 movable guards	
		6.5.3 Hold-to-run control	
		6.5.5 Electro-sensitive protective equipment (ESPE)	
		6.5.6 Pressure-sensitive protective equipment (PSPE)	
	6.6	Prevention of access to moving parts	
	3.3	6.6.1 General	
		6.6.2 Guarding of tools	
		6.6.3 Guarding of drives	14
		6.6.4 Guarding of shearing and/or crushing zones	14

SIST EN ISO 19085-4:2018

ISO 19085-4:2018(E)

	6.7	Impact hazard	15
	6.8	Clamping devices	15
	6.9	Measures against ejection	15
		6.9.1 General	15
		6.9.2 Guards materials and characteristics	15
		6.9.3 Anti-kickback devices	15
	6.10	Work-piece supports and guides	17
		6.10.1 Work-piece support	17
		6.10.2 Middle support device	
		6.10.3 Angle cutting device	18
7	Cafaty	requirements and measures for protection against other hazards	10
/	7.1	Fire	
		Noise	
	7.2	7.2.1 Noise reduction at the design stage	
		7.2.2 Noise emission measurement	
	7.3	Emission of chips and dust	
	7.3 7.4	Electricity	
	7.4	7.4.1 General	
		7.4.1 General 7.4.2 Displaceable machines	
	7.5	Ergonomics and handling	
	7.6	Lighting	
	7.0 7.7	Pneumatics	
	7.7	Hydraulics	
	7.10	Electromagnetic compatibility ANDARD PREVIEW Laser	20
	7.11	Static electricity (standards.iteh.ai) Errors of fitting	20
	7.12	Isolation	20
	7.13	Maintenance SIST EN ISO 19085-42018	21
	7.11	Isolation SIST EN ISO 19085-4:2018 https://standards.iteh.ai/catalog/standards/sist/1cdbd17d-3dd0-4b4d-925a-	2 1
8	iniorn	1ation for useee8ch9347969/sist-en-iso-19085-4-2018	Z1
	8.1	Warning devices	
	8.2	Marking	
		8.2.1 General	
		8.2.2 Additional markings	
	8.3	Instruction handbook	
		8.3.1 General	
		8.3.2 Additional information	22
Annex	A (info	rmative) Performance level required	23
Annex	B (nor	mative) Test for braking function	25
	-	native) Stability test for displaceable machines	
Annex	D (nor	mative) Impact test for guards	27
	-	mative) Noise emission measurement for machines not in ISO 7960:1995	
		native) Riving knife longitudinal and lateral stability tests	

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. www.iso.org/iso/foreword.html. www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 39, *Machine tools*, Subcommittee SC 4, *Woodworking machines*. SIST EN ISO 19085-4:2018 https://standards.iteh.ai/catalog/standards/sist/1cdbd17d-3dd0-4b4d-925a-

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.