
Lesnoobdelovalni stroji - Varnost - 9. del: Krožne žage (s podajalno mizo ali brez nje) (ISO 19085-9:2024)

Woodworking machines - Safety - Part 9: Circular saw benches (with and without sliding table) (ISO 19085-9:2024)

Holzbearbeitungsmaschinen - Sicherheit - Teil 9: Tischkreissägemaschinen (mit und ohne Schiebetisch) (ISO 19085-9:2024)

Machines à bois - Sécurité - Partie 9: Scies circulaires à table de menuisier (avec et sans table mobile) (ISO 19085-9:2024)

Ta slovenski standard je istoveten z: EN ISO 19085-9:2024

SIST EN ISO 19085-9:2025

ICS:

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

SIST EN ISO 19085-9:2025

en,fr,de

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 19085-9

October 2024

ICS 13.110; 79.120.10

Supersedes EN ISO 19085-9:2020

English Version

Woodworking machines - Safety - Part 9: Circular saw
benches (with and without sliding table) (ISO 19085-
9:2024)

Machines à bois - Sécurité - Partie 9: Scies circulaires à
table de menuisier (avec et sans table mobile) (ISO
19085-9:2024)

Holzbearbeitungsmaschinen - Sicherheit - Teil 9:
Tischkreissägemaschinen (mit und ohne Schiebetisch)
(ISO 19085-9:2024)

This European Standard was approved by CEN on 20 July 2024.

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, Türkiye and United Kingdom.

[SIST EN ISO 19085-9:2025](https://standards.iteh.ai/catalog/standards/sist/a239f3b0-1dc4-40e9-8e7b-c3fe008538ce/sist-en-iso-19085-9-2025)

<https://standards.iteh.ai/catalog/standards/sist/a239f3b0-1dc4-40e9-8e7b-c3fe008538ce/sist-en-iso-19085-9-2025>



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

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

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

iTeh Standards
(<https://standards.itih.ai>)
Document Preview

[SIST EN ISO 19085-9:2025](https://standards.itih.ai/catalog/standards/sist/a239f3b0-1dc4-40e9-8e7b-c3fe008538ce/sist-en-iso-19085-9-2025)

<https://standards.itih.ai/catalog/standards/sist/a239f3b0-1dc4-40e9-8e7b-c3fe008538ce/sist-en-iso-19085-9-2025>

European foreword

This document (EN ISO 19085-9:2024) 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 April 2025, and conflicting national standards shall be withdrawn at the latest by April 2025.

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 ISO 19085-9:2020.

This document is intended to be used in conjunction with Part 1 of the series.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

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, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 19085-9:2024 has been approved by CEN as EN ISO 19085-9:2024 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 standardization 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, and amending Directive 95/16/EC (recast).

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 Annex I of Directive 2006/42/EC

The relevant Essential Requirements of Directive 2006/42/EC	Clauses/sub-clauses of this EN	Remarks/Notes
1.1.2 Principles of safety integration		
fitted for its function	Clauses 4, 5, 6, 7	
intended use and reasonably foreseeable misuse	Clauses 4, 5, 6, 7	
constraints in use	Clauses 4, 5, 6, 7	
equipment	Clauses 4, 5, 6, 7	
1.1.3 Materials and products	5.2, 6.3	
1.1.5 Design of machinery to facilitate its handling	6.5	
1.1.6 Ergonomics	6.5	
1.2.1 Safety and reliability of control systems	4.1, 4.3.1, 4.14	
1.2.2 Control devices	4.2, 4.3, 4.4, 4.7	
1.2.3 Starting	4.3	
1.2.4.1 Normal stop	4.4.2, 4.5	
1.2.4.3 Emergency stop	4.4.4, 4.5	
1.2.6 Failure of the power supply	4.8, 6.7	
1.3.1 Risk of loss of stability	5.1, 7.3	
1.3.2 Risk of break-up during operation	4.3.1, 5.2, 5.9, 6.7, 6.14, 7.3	
1.3.3 Risks due to falling or ejected objects	5.2, 5.3, 5.5, 5.8, 5.9, 7.3	
1.3.6 Risks relating to variations in the operating conditions	4.7	
1.3.7 Risks related to moving parts	5.6, 5.7, 7.3	
1.3.8 Choice of protection against risks related to moving parts	4.14, 5.5, 5.6, 5.7, 7.3	

The relevant Essential Requirements of Directive 2006/42/EC	Clauses/sub-clauses of this EN	Remarks/Notes
1.3.9 Risk of uncontrolled movements	4.1, 4.3.1, 4.5, 5.4	
1.4.1 General requirements	5.2, 5.5, 5.6, 5.9, 6.3	
1.4.2.1 Fixed guards	5.5.1	
1.4.2.2 Interlocking movable guards	5.5.2	
1.4.2.3 Adjustable guards restricting access	5.6.1	
1.4.3 Special requirements for protective devices	5.5.3, 5.5.6	
1.5.1 Electricity supply	6.4, 6.13	
1.5.2 Static electricity	6.11	
1.5.3 Energy supply other than electricity	6.7	
1.5.4 Errors of fitting	6.12	
1.5.6 Fire	6.1, 6.11	
1.5.8 Noise	6.2, Annex F	
1.5.11 External radiation	6.9	
1.5.12 Laser equipment	6.10	
1.5.13 Emission of hazardous materials and substances	6.3	
1.6.1 Machinery maintenance	6.14, 7.3	
1.6.2 Access to operating position and servicing points	4.2, 6.14, 7.3	
1.6.3 Isolation of energy sources	6.13, 7.3	
1.6.4 Operator intervention	5.5, 5.6, 7.3	
1.7.1 Information and warnings on the machinery	6.10, 7.1, 7.2	
1.7.2 Warning of residual risks	6.10, 7.1	
1.7.3 Marking of machinery	7.2	
1.7.4 Instructions	6.2, 6.10, 7.3, Annex F	
2.3 Machinery for working wood and analogous materials		
guiding	5.1, 5.10	
ejection	5.9	
brake	4.5, 5.4	
accidental tool contact	5.5, 5.6	

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 19085-9

Woodworking machines — Safety — Part 9: Circular saw benches (with and without sliding table)

Machines à bois — Sécurité —

*Partie 9: Scies circulaires à table de menuisier (avec et sans table
mobile)*

**Second edition
2024-08**

<https://standards.iteh.ai/>

<https://standards.iteh.ai/catalog/standards/sist/a239f3b0-1dc4-40e9-8e7b-c3fe008538ce/sist-en-iso-19085-9-2025>

ISO 19085-9:2024(en)

iTeh Standards (<https://standards.iteh.ai>) Document Preview

[SIST EN ISO 19085-9:2025](https://standards.iteh.ai/catalog/standards/sist/a239f3b0-1dc4-40e9-8e7b-c3fe008538ce/sist-en-iso-19085-9-2025)

<https://standards.iteh.ai/catalog/standards/sist/a239f3b0-1dc4-40e9-8e7b-c3fe008538ce/sist-en-iso-19085-9-2025>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2024

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
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

ISO 19085-9:2024(en)

Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Safety requirements and measures for controls	3
4.1 Safety and reliability of control systems.....	3
4.2 Control devices.....	3
4.3 Start.....	4
4.3.1 Direct start.....	4
4.3.2 Start via control power-on.....	5
4.4 Safe stops.....	5
4.4.1 General.....	5
4.4.2 Normal stop.....	5
4.4.3 Operational stop.....	5
4.4.4 Emergency stop.....	5
4.5 Braking function of tools.....	5
4.6 Mode selection.....	5
4.7 Tool speed changing.....	5
4.7.1 Speed changing by shifting the belts on the pulleys.....	5
4.7.2 Speed changing by incremental speed change motor.....	5
4.7.3 Infinitely variable speed by frequency inverter.....	5
4.8 Failure of any power supply.....	5
4.9 Manual reset control.....	5
4.10 Standstill detection and monitoring.....	6
4.11 Machine moving parts speed monitoring.....	6
4.12 Time delay.....	6
4.13 Teleservice.....	6
4.14 Power-operated adjustment of the saw blades and the rip fence.....	6
4.14.1 Risk of contact between the saw blades and the rip fence.....	6
4.14.2 Crushing hazard for the body.....	6
4.14.3 Crushing and shearing hazard for the arm, hand or finger.....	7
5 Safety requirements and measures for protection against mechanical hazards	7
5.1 Stability.....	7
5.2 Risk of break-up during operation.....	7
5.3 Tool and tool fixing design.....	8
5.3.1 General.....	8
5.3.2 Spindle locking.....	8
5.3.3 Circular saw blade fixing device.....	8
5.3.4 Flange dimension for circular saw blades.....	8
5.3.5 Fixing device for milling tools.....	8
5.4 Braking.....	8
5.4.1 Braking of tools.....	8
5.4.2 Maximum run-down time.....	8
5.4.3 Brake release.....	8
5.5 Safeguards.....	8
5.5.1 Fixed guards.....	8
5.5.2 Interlocking movable guards.....	9
5.5.3 Hold-to-run control.....	9
5.5.4 Two-hand control.....	9
5.5.5 Electro-sensitive protective equipment (ESPE).....	9
5.5.6 Pressure-sensitive protective equipment (PSPE).....	9
5.5.7 Enabling control.....	9

ISO 19085-9:2024(en)

5.6	Prevention of access to hazardous moving parts.....	9
5.6.1	Access to the saw blade part above the machine table.....	9
5.6.2	Access to the saw blade part below the machine table.....	14
5.6.3	Guarding of drives.....	15
5.7	Impact hazard.....	15
5.8	Clamping devices.....	15
5.9	Measures against ejection.....	15
5.9.1	General.....	15
5.9.2	Guards materials and characteristics.....	15
5.9.3	Anti-kickback devices.....	16
5.10	Workpiece supports and guides.....	19
5.10.1	Rip fence.....	19
5.10.2	Cross-cut fence.....	21
5.10.3	Machine table.....	21
5.10.4	Extension table.....	22
5.11	Safety appliances.....	22
6	Safety requirements and measures for protection against other hazards.....	23
6.1	Fire.....	23
6.2	Noise.....	23
6.2.1	Noise reduction at the design stage.....	23
6.2.2	Noise emission measurement and declaration.....	23
6.3	Emission of chips and dust.....	23
6.4	Electricity.....	24
6.5	Ergonomics and handling.....	24
6.6	Lighting.....	24
6.7	Pneumatics.....	24
6.8	Hydraulics.....	24
6.9	Electromagnetic compatibility.....	24
6.10	Laser.....	24
6.11	Static electricity.....	24
6.12	Errors of fitting.....	25
6.13	Isolation.....	25
6.14	Maintenance.....	25
6.15	Relevant but not significant hazards.....	25
7	Information for use.....	25
7.1	Warning devices.....	25
7.2	Marking.....	25
7.2.1	General.....	25
7.2.2	Additional markings.....	25
7.3	Instruction handbook.....	26
7.3.1	General.....	26
7.3.2	Additional information.....	26
	Annex A (informative) List of significant hazards.....	28
	Annex B (informative) Performance level required.....	30
	Annex C (normative) Stability test.....	31
	Annex D (normative) Test for braking function.....	32
	Annex E (normative) Impact test for guards.....	33
	Annex F (normative) Noise test code.....	34
	Annex G (normative) Riving knife rigidity test.....	37
	Annex H (normative) Minimum dimensions of machine table, extension table and table insert.....	39
	Annex I (normative) Saw blade guard rigidity test.....	40
	Bibliography.....	43

ISO 19085-9:2024(en)

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 document 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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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*, 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 second edition cancels and replaces the first edition (ISO 19085-9:2019), which has been technically revised. The main changes are as follows:

- the Scope now specifies that machines are capable of continuous production use;
- displaceable machines are not referenced anymore;
- the list of significant hazards has been moved to new [Annex A](#);
- the structure has been simplified and modified, in particular for [5.6](#);
- [subclause 6.2](#) has been updated;
- a new full noise test code has been added in [Annex F](#).

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.

ISO 19085-9:2024(en)

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 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, 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 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.

[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.”;