International Standard

ISO 19085-22

First edition
2026-11

Woodworking machines — Safety —

Part 22: Single blade automatic and semi-automatic up-cutting cross-cut sawing machines

Machines à bois — Sécurité —

Partie 22: Tronçonneuses monolames automatiques et semi-automatiques à coupe ascendante

Sample Document
Get full document from standards.iteh.ai

Reference number
ISO 19085-22:2026(en)

© ISO 2026

ISO 19085-22:2026 • https://standards.iteh.ai/catalog/standards/iso/3e85cc83-a087-40e3-b5a6-fc11176e8e46/iso-19085-22-2026

Sample Document

get full document from standards.iteh.ai



COPYRIGHT PROTECTED DOCUMENT

© ISO 2026

All rights reserved.

This ISO publication is protected by copyright and is owned by ISO and/or its licensors.

The content of this ISO publication is provided under licence, not sold. Use is subject to the applicable licence terms issued by ISO, an ISO member body, or an authorized third-party distributor.

Except as required for implementation or expressly permitted by a separate licence, no part of this ISO publication may be reproduced, distributed, modified, used, or made available in any form or by any means – electronic or mechanical, including photocopying, scanning, recording, or posting on internal or external digital platforms.

Any use beyond the scope of the granted rights is prohibited and may result in legal action.

ISO copyright office
CP 401 • CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

ISO 19085-22:2026 • https://standards.iteh.ai/catalog/standards/iso/3e85cc83-a087-40e3-b5a6-fc11176e8e46/iso-19085-22-2026

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 5
4.3.1 Direct start 5
4.3.2 Start via control power-on 5
4.3.3 Cutting stroke 6
4.4 Safe stops 6
4.4.1 General 6
4.4.2 Normal stop 6
4.4.3 Operational stop 6
4.4.4 Emergency stop 6
4.5 Braking function of tools 6
4.6 Mode selection 6
4.7 Tool speed changing 7
4.7.1 Speed changing by shifting the belts on the pulleys 7
4.7.2 Speed changing by incremental speed change motor 7
4.7.3 Infinitely variable speed by frequency inverter 7
4.8 Failure of any power supply 7
4.9 Manual reset control 7
4.10 Standstill detection and monitoring 8
4.11 Machine moving parts speed monitoring 8
4.12 Time delay 8
4.13 Teleservice 8
4.14 Power operated pivoting and tilting 8
5 Safety requirements and measures for protection against mechanical hazards **8**
5.1 Stability 8
5.2 Risk of break-up during operation 9
5.3 Tool and tool fixing design 9
5.3.1 General 9
5.3.2 Spindle locking 9
5.3.3 Circular saw blade fixing device 9
5.3.4 Flange dimension for circular saw blades 9
5.4 Braking 9
5.4.1 Braking of tools 9
5.4.2 Maximum run-down time 9
5.4.3 Brake release 9
5.5 Safeguards 9
5.5.1 Fixed guards 9
5.5.2 Interlocking movable guards 10
5.5.3 Hold-to-run control 10
5.5.4 Two-hand control 10
5.5.5 Electro-sensitive protective equipment (ESPE) 10
5.5.6 Pressure-sensitive protective equipment (PSPE) 10
5.5.7 Enabling control 10
5.6 Prevention of access to hazardous moving parts 10
5.6.1 Safeguarding of the saw blade in its rest position 10
5.6.2 Safeguarding of automatic machines 11

Sample Document
iTeh Standards (https://standards.iteh.ai)

© ISO 2026 – All rights reserved

ISO 19085-22:2026 • https://standards.iteh.ai/catalog/standards/iso/3e85cc83-a087-40e3-b5a6-fc11176e8e46/iso-19085-22-2026

5.6.3 Safeguarding of semi-automatic machines 13
5.6.4 Safeguarding of the workpiece positioning mechanism on semi-automatic machines 14
5.7 Impact hazard 14
5.8 Clamping devices 14
5.9 Measures against ejection 14
5.9.1 General 14
5.9.2 Guards materials and characteristics 14
5.10 Workpiece supports and guides 15
6 Safety requirements and measures for protection against other hazards 16
6.1 Fire 16
6.2 Noise 16
6.2.1 Noise reduction at the design stage 16
6.2.2 Noise emission measurement and declaration 16
6.3 Emission of chips and dust 16
6.4 Electricity 16
6.5 Ergonomics and handling 16
6.6 Lighting 16
6.7 Pneumatics 16
6.8 Hydraulics 16
6.9 Electromagnetic compatibility 17
6.10 Laser 17
6.11 Static electricity 17
6.12 Errors of fitting 17
6.13 Isolation 17
6.14 Maintenance 17
6.15 Relevant but not significant hazards 17
7 Information for use 17
7.1 Warning devices 17
7.2 Marking 17
7.2.1 General 17
7.2.2 Additional markings 17
7.3 Instruction handbook 18
7.3.1 General 18
7.3.2 Additional information 18
Annex A (informative) **List of significant hazards 19**
Annex B (informative) **Performance level required 21**
Annex C (informative) **Stability test 23**
Annex D (normative) **Test for braking function 24**
Annex E (normative) **Impact test for guards 25**
Annex F (normative) **Noise test code 26**

Sample Document
Get full document from standards.iteh.ai

© ISO 2026 – All rights reserved

ISO 19085-22:2026 • https://standards.iteh.ai/catalog/standards/iso/3e85cc83-a087-40e3-b5a6-fc11176e8e46/iso-19085-22-2026

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).

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.

Sample Document

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).

get full document from standards.iteh.ai

This document is intended to be used in conjunction with ISO 19085-1:2021.

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 2026 – All rights reserved

ISO 19085-22:2026 • https://standards.iteh.ai/catalog/standards/iso/3e85cc83-a087-40e3-b5a6-fc11176e8e46/iso-19085-22-2026

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. The ISO 19085 series is intended for designers, manufacturers, suppliers and importers of the machines specified in the Scope.

This document is a type-C standard as stated 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 (regulators, accident prevention organisations, market surveillance, etc.).

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, 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 2026 – All rights reserved

ISO 19085-22:2026 • https://standards.iteh.ai/catalog/standards/iso/3e85cc83-a087-40e3-b5a6-fc11176e8e46/iso-19085-22-2026

— “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.”.

Sample Document

get full document from standards.iteh.ai

© ISO 2026 – All rights reserved

ISO 19085-22:2026 • https://standards.iteh.ai/catalog/standards/iso/3e85cc83-a087-40e3-b5a6-fc11176e8e46/iso-19085-22-2026

Sample Document

get full document from standards.iteh.ai

Woodworking machines — Safety —

Part 22: Single blade automatic and semi-automatic up-cutting cross-cut sawing machines

1 Scope

This document specifies the safety requirements and measures for single blade automatic and semi-automatic up-cutting cross-cut sawing machines, capable of continuous production use, hereinafter referred to also as “machines”.

The machines are designed to cut solid wood, material with similar physical characteristics to wood, and:

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

— composite materials, with core consisting of, for example, 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.

Sample Document
get full document from standards.iteh.ai

This document deals with all significant hazards, hazardous situations or hazardous events, listed in Annex A, relevant to the machines, when it is used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer.

This document is also applicable to the other life cycle phases of the machines: transport, assembly, adjustment, maintenance, dismantling and scrapping.

Any workpiece positioning equipment fitted to the machine is included in this document.

This document does not deal with any hazards related to single machine being used in combination with any other machine as part of a line.

This document does not apply to:

— machines designed for cross cutting logs;

— machines intended for use in potentially explosive atmosphere;

— machines manufactured prior to 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 2026 – All rights reserved

ISO 19085-22:2026 • https://standards.iteh.ai/catalog/standards/iso/3e85cc83-a087-40e3-b5a6-fc11176e8e46/iso-19085-22-2026