
Woodworking machines — Safety —
Part 13:
Multi-blade rip sawing machines with
manual loading and/or unloading

Machines à bois — Sécurité —

*Partie 13: Déligneuses multi-lames à chargement et/ou
déchargement manuel*

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

ISO 19085-13:2020

<https://standards.iteh.ai/catalog/standards/iso/5a0c15c3-db15-4d16-82c4-c9456bce2b67/iso-19085-13-2020>



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

ISO 19085-13:2020

<https://standards.iteh.ai/catalog/standards/iso/5a0c15c3-db15-4d16-82c4-c9456bce2b67/iso-19085-13-2020>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2020

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

Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 List of significant hazards	4
5 Safety requirements and measures for controls	6
5.1 Safety and reliability of control systems	6
5.2 Control devices	6
5.3 Start	8
5.4 Safe stops	8
5.4.1 General	8
5.4.2 Normal stop	8
5.4.3 Operational stop	8
5.4.4 Emergency stop	8
5.5 Braking function of tool spindles	8
5.6 Mode selection	8
5.6.1 General	8
5.6.2 Pressure shoe/board cutting mode	8
5.6.3 Cleaning mode	9
5.6.4 Powered axial adjustment mode	9
5.7 Spindle speed changing	10
5.7.1 Spindle speed changing by changing belts on the pulleys	10
5.7.2 Spindle speed changing by incremental speed change motor	10
5.7.3 Infinitely variable speed by frequency inverter	10
5.8 Failure of any power supply	10
5.9 Manual reset control	10
5.10 Enabling control	10
5.11 Machine moving parts limited speed monitoring	10
5.12 Time delay	10
5.13 Powered adjustments when guards are closed	10
6 Safety requirements and measures for protection against mechanical hazards	11
6.1 Stability	11
6.1.1 Stationary machines	11
6.1.2 Displaceable machines	11
6.2 Risk of break-up during operation	11
6.3 Tool holder and tool design	11
6.3.1 General	11
6.3.2 Spindle locking	11
6.3.3 Circular saw blade fixing device	11
6.3.4 Flanges dimensions for circular saw blades	11
6.4 Braking	11
6.4.1 Braking of tool spindles	11
6.4.2 Maximum run-down time	12
6.4.3 Brake release	12
6.5 Safeguard design	12
6.5.1 Fixed guards	12
6.5.2 Interlocking moveable guards	12
6.5.3 Hold-to-run control	12
6.5.4 Two-hand control	12
6.5.5 Electro-sensitive protective equipment (ESPE)	12
6.5.6 Pressure sensitive protective equipment (PSPE)	12

6.6	Prevention of access to moving parts.....	12
6.6.1	General.....	12
6.6.2	Guarding of tools.....	13
6.6.3	Guarding of drives.....	13
6.6.4	Guarding of crushing and shearing zones.....	13
6.7	Impact hazard.....	14
6.8	Clamping devices.....	14
6.9	Measures against ejection.....	14
6.9.1	General.....	14
6.9.2	Guards materials and characteristics.....	14
6.9.3	Measures against ejection through the infeed opening.....	15
6.9.4	Measures against ejection through the outfeed opening.....	25
6.10	Work-piece support and guide.....	28
7	Safety requirements and measures for protection against other hazards.....	28
7.1	Fire.....	28
7.2	Noise.....	28
7.2.1	Noise reduction at the design stage.....	28
7.2.2	Noise emission measurement.....	28
7.3	Emission of chips and dust.....	28
7.4	Electricity.....	28
7.4.1	General.....	28
7.4.2	Displaceable machines.....	28
7.5	Ergonomics and handling.....	28
7.6	Lighting.....	28
7.7	Pneumatics.....	29
7.8	Hydraulics.....	29
7.9	Electromagnetic compatibility.....	29
7.10	Laser.....	29
7.11	Static electricity.....	29
7.12	Errors of fitting.....	29
7.13	Isolation.....	29
7.14	Maintenance.....	29
8	Information for use.....	29
8.1	Warning devices.....	29
8.2	Marking.....	29
8.2.1	General.....	29
8.2.2	Additional marking.....	29
8.3	Instruction handbook.....	30
8.3.1	General.....	30
8.3.2	Additional information.....	30
	Annex A (informative) Performance level required.....	31
	Annex B (normative) Test for braking function.....	32
	Annex C (normative) Stability test for displaceable machines.....	33
	Annex D (normative) Impact test method for guards.....	34
	Annex E (normative) Noise emission measurement for machines not in ISO 7960:1995.....	35
	Annex F (normative) Test for the anti-splinter system on machines with one chain conveyor.....	36
	Bibliography.....	40

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*, 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).

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 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 that the manufacturer will need to give to the user.

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 part 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 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.”.

[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 847-1:2017.