

This is a preview of "ISO 19085-5:2017". [Click here to purchase the full version from the ANSI store.](#)

First edition
2017-07

Woodworking machines — Safety —

Part 5: Dimension saws

*Machines à bois — Sécurité —
Partie 5: Scies au format*



Reference number
ISO 19085-5:2017(E)

© ISO 2017

This is a preview of "ISO 19085-5:2017". Click [here](#) to purchase the full version from the ANSI store.



COPYRIGHT PROTECTED DOCUMENT

© ISO 2017, Published in Switzerland

All rights reserved. Unless otherwise specified, 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
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

This is a preview of "ISO 19085-5:2017". Click here to purchase the full version from the ANSI store.

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
5.7 Spindle speed changing.....	9
5.7.1 Spindle speed changing by changing belts on the pulleys.....	9
5.7.2 Spindle speed changing by incremental speed change motor.....	9
5.7.3 Infinitely variable speed by frequency inverter.....	9
5.8 Failure of any power supply.....	9
5.9 Manual reset control.....	9
5.10 Enabling control.....	9
5.11 Machine moving part speed monitoring.....	9
5.12 Time delay.....	10
5.13 Power-operated adjustment of the saw blades and/or fences.....	10
6 Safety requirements and measures for protection against mechanical hazards	10
6.1 Stability.....	10
6.1.1 Stationary machines.....	10
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 Flange dimension for circular saw blades.....	11
6.3.5 Fixing device for milling tools.....	11
6.4 Braking.....	12
6.4.1 Braking of tool spindles.....	12
6.4.2 Maximum run-down time.....	12
6.4.3 Brake release.....	12
6.5 Safeguards.....	13
6.5.1 Fixed guards.....	13
6.5.2 Interlocking movable guards.....	13
6.5.3 Hold-to-run control.....	13
6.5.4 Two-hand control.....	13
6.5.5 Electro-sensitive protective equipment (ESPE).....	13
6.5.6 Pressure-sensitive protective equipment (PSPE).....	13
6.6 Prevention of access to moving parts.....	13
6.6.1 General.....	13
6.6.2 Guarding of tools.....	13

This is a preview of "ISO 19085-5:2017". [Click here to purchase the full version from the ANSI store.](#)

6.6.3	Guarding of drives	20
6.6.4	Guarding of shearing and/or crushing zones	20
6.7	Impact hazard	21
6.8	Clamping devices	21
6.9	Measures against ejection	21
6.9.1	General	21
6.9.2	Guards materials and characteristics	21
6.9.3	Anti-kickback devices	22
6.10	Work-piece supports and guides	25
6.10.1	Rip fence	25
6.10.2	Cross-cut fence	27
6.10.3	Work piece clamping shoe	28
6.10.4	Machine table	28
6.10.5	Extension table	28
6.10.6	Sliding table	28
6.11	Safety appliances	29
7	Safety requirements and measures for protection against other hazards	31
7.1	Fire	31
7.2	Noise	31
7.2.1	Noise reduction at the design stage	31
7.2.2	Noise emission measurement	31
7.3	Emission of chips and dust	32
7.4	Electricity	32
7.4.1	General	32
7.4.2	Displaceable machines	32
7.5	Ergonomics and handling	32
7.6	Lighting	32
7.7	Pneumatics	32
7.8	Hydraulics	33
7.9	Electromagnetic compatibility	33
7.10	Laser	33
7.11	Static electricity	33
7.12	Errors of fitting	33
7.13	Isolation	33
7.14	Maintenance	33
8	Information for use	33
8.1	Warning devices	33
8.2	Marking	33
8.2.1	General	33
8.2.2	Additional markings	33
8.3	Instruction handbook	34
8.3.1	General	34
8.3.2	Additional information	34
	Annex A (informative) Performance level required	37
	Annex B (normative) Test for braking function	39
	Annex C (normative) Stability test for displaceable machines	40
	Annex D (normative) Impact test for guards	42
	Annex E (normative) Noise emission measurement for machines not in ISO 7960	43
	Annex F (normative) Riving knife longitudinal and lateral rigidity tests	44
	Annex G (normative) Minimum dimensions of machine table and extension table	46
	Annex H (normative) Saw blade guard rigidity test	47
	Bibliography	50

This is a preview of "ISO 19085-5:2017". Click here to purchase the full version from the ANSI store.

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.

The committee responsible for this document is ISO/TC 39, *Machine tools*, Subcommittee SC 4 *Woodworking machines*.

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.

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 part of ISO 19085.

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 or annex right after the title by one of the following statements:

- “This subclause of ISO 19085-1:2017 applies.”;
- “This subclause of ISO 19085-1:2017 applies with the following additions.”, or “This subclause of ISO 19085-1:2017 applies with the following additions, subdivided into further specific subclauses.”;
- “This subclause of ISO 19085-1:2017 does not apply.”;
- “This subclause of ISO 19085-1:2017 is replaced by the following text.”, or “This subclause of ISO 19085-1:2017 is replaced by the following text, subdivided into further specific subclauses.”.

Specific subclauses and annexes in this part of ISO 19085 without correspondent in ISO 19085-1:2017 are indicated by the introductory sentence: “Subclause (or annex) specific to this part of ISO 19085.”

[Clauses 1, 2, 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 847-1:2013 and EN 847-2:2013.