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**Woodworking machines — Safety —**  
**Part 11:**  
**Combined machines**

*Machines à bois — Sécurité —*

*Partie 11: Machines combinées*



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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](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

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# Contents

Page

<b>Foreword</b>	<b>v</b>
<b>Introduction</b>	<b>vi</b>
<b>1 Scope</b>	<b>1</b>
<b>2 Normative references</b>	<b>1</b>
<b>3 Terms and definitions</b>	<b>2</b>
<b>4 List of significant hazards</b>	<b>5</b>
<b>5 Safety requirements and measures for controls</b>	<b>7</b>
5.1 Safety and reliability of control systems	7
5.2 Control devices	7
5.3 Start	7
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	9
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
5.7.4 Spindle speed limiting device for tenoning	9
5.7.5 Changing of the direction of spindle rotation	9
5.8 Failure of any power supply	9
5.9 Manual reset control	9
5.10 Enabling control	10
5.11 Machine moving parts speed monitoring	10
5.12 Time delay	10
5.13 Power-operated adjustments	10
<b>6 Safety requirements and measures for protection against mechanical hazards</b>	<b>10</b>
6.1 Stability	10
6.1.1 Stationary machines	10
6.1.2 Displaceable machines	10
6.2 Risk of break-up during operation	10
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 dimensions for circular saw blades	11
6.3.5 Arbor rings/fixing device for milling tools	11
6.3.6 Quick tool/arbor change system	11
6.3.7 Manual adjustment of arbor height	11
6.3.8 Manual adjustment of arbor inclination	12
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	12
6.5.1 Fixed guards	12
6.5.2 Interlocking movable guards	12
6.5.3 Hold-to-run control	12
6.5.4 Two hand control	12

6.5.5	Electro-sensitive protection equipment (ESPE) .....	13
6.5.6	Pressure sensitive protection equipment (PSPE) .....	13
6.6	Prevention of access to moving parts .....	13
6.6.1	General .....	13
6.6.2	Guarding of tools .....	13
6.6.3	Guarding of drives .....	13
6.6.4	Guarding of shearing and/or crushing 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 material and characteristics .....	14
6.9.3	Anti-kickback devices .....	14
6.10	Workpiece supports and guides .....	14
6.11	Safety appliances .....	15
6.12	Elements not in use .....	15
6.13	Adjustments in tenoning-sawing mode .....	15
<b>7</b>	<b>Safety requirements and measures for protection against other hazards .....</b>	<b>16</b>
7.1	Fire .....	16
7.2	Noise .....	16
7.2.1	Noise reduction at the design stage .....	16
7.2.2	Noise emission measurement .....	16
7.3	Emission of chips and dust .....	16
7.4	Electricity .....	16
7.4.1	General .....	16
7.4.2	Displaceable machines .....	16
7.5	Ergonomics and handling .....	16
7.6	Lighting .....	17
7.7	Pneumatics .....	17
7.8	Hydraulics .....	17
7.9	Electromagnetic compatibility .....	17
7.10	Laser .....	17
7.11	Static electricity .....	17
7.12	Errors of fitting .....	17
7.13	Isolation .....	17
7.14	Maintenance .....	17
<b>8</b>	<b>Information for use .....</b>	<b>17</b>
8.1	Warning devices .....	17
8.2	Markings .....	18
8.2.1	General .....	18
8.2.2	Additional markings .....	18
8.3	Instruction handbook .....	18
8.3.1	General .....	18
8.3.2	Additional information .....	18
	<b>Annex A (informative) Performance level required .....</b>	<b>19</b>
	<b>Annex B (normative) Test for braking function .....</b>	<b>20</b>
	<b>Annex C (normative) Stability test for displaceable machines .....</b>	<b>21</b>
	<b>Annex D (normative) Impact test for guards .....</b>	<b>22</b>
	<b>Annex E (normative) Noise emission measurement for machines not in ISO 7960:1995 .....</b>	<b>23</b>
	<b>Annex F (normative) Table dimensions .....</b>	<b>24</b>
	<b>Annex G (informative) Example noise declaration .....</b>	<b>26</b>
	<b>Bibliography .....</b>	<b>27</b>

## 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](http://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](http://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](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 39, *Machine tools*, Subcommittee SC 4, *Woodworking machines*.

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](http://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 and with ISO 19085-5:2017, ISO 19085-6:2017, ISO 19085-7:2019 and ISO 19085-9:2019, which give requirements specific for the integrated working units.

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 this document, safety requirements are referenced to the relevant sections of ISO 19085-1:2017, ISO 19085-5:2017, ISO 19085-6:2017, ISO 19085-7:2019 and ISO 19085-9:2019 to avoid repetition and reduce their length.

Specific subclauses and annexes in this document without correspondent in ISO 19085-1, ISO 19085-5, ISO 19085-6, ISO 19085-7 or ISO 19085-9 are indicated by the introductory sentence: "Subclause (or annex) specific to this document."

[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 847-1:2017 and EN 847-2:2017.

# Woodworking machines — Safety —

## Part 11: Combined machines

### 1 Scope

This document gives the safety requirements and measures for stationary and displaceable combined woodworking machines, having at least two separately usable working units and with manual loading and unloading of the workpiece, hereinafter referred to as “machines”. The integrated working units can be of these types only:

- a sawing unit;
- a moulding unit;
- a planing unit.

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

NOTE 1 For the definitions of stationary and displaceable machines, see ISO 19085-1:2017, 3.4 and 3.5.

This document deals with all significant hazards, hazardous situations and events as listed in [Clause 4](#), relevant to the machines, when operated, adjusted and maintained as intended and under the conditions foreseen by the manufacturer including reasonably foreseeable misuse. Also, transport, assembly, dismantling, disabling and scrapping phases have been taken into account.

NOTE 2 For relevant but not significant hazards, e.g. sharp edges of the machine frame, see ISO 12100:2010.

This document does apply to machines also equipped with the devices/additional working units listed in the Scopes of ISO 19085-5:2017, ISO 19085-6:2017, ISO 19085-7:2019 and ISO 19085-9:2019.

This document does not apply to:

- a) machines incorporating only a planing unit and a mortising device;

NOTE 3 Such machines are dealt with in ISO 19085-7:2019.

- b) combined machines incorporating a band saw unit;
- c) machines with a mortising unit with a separate drive other than the planing unit drive;
- d) machines intended for use in potentially explosive atmosphere;
- e) machines manufactured before the date of its publication as an International Standard.

### 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 7960:1995, *Airborne noise emitted by machine tools — Operating conditions for woodworking machines*

ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction*

ISO 13849-1:2015, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design*

ISO 19085-1:2017, *Woodworking machines — Safety — Part 1: Common requirements*

ISO 19085-5:2017, *Woodworking machines — Safety — Part 5: Dimension saws*

ISO 19085-6:2017, *Woodworking machines — Safety — Part 6: Single spindle vertical moulding machines ("toupies")*

ISO 19085-7:2019, *Woodworking machines — Safety — Part 7: Surface planing, thickness planing, combined surface/thickness planing machines*

ISO 19085-9:2019, *Woodworking machines — Safety — Part 9: Circular saw benches (with and without sliding table)*

IEC 61800-5-2:2016, *Adjustable speed electrical power drive systems — Part 5-2: Safety requirements — Functional*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12100:2010, ISO 13849-1:2015, ISO 19085-1:2017, ISO 19085-5:2017, ISO 19085-6:2017, ISO 19085-7:2019, ISO 19085-9:2019 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

#### 3.1

##### **combined machine**

machine incorporating two or more separately usable working units, i.e. a *sawing unit* (3.2), a *moulding unit* (3.5) and/or a *planing unit* (3.6)

Note 1 to entry: Workpiece feed is primarily by hand but the machine can also have devices for connection of demountable power feed units.

Note 2 to entry: The sawing unit and the moulding unit can work simultaneously.

Note 3 to entry: See examples of such machines in Figures 2, 3, 4 and 5.

#### 3.2

##### **sawing unit**

*dimension saw unit* (3.3), or *table saw unit* (3.4), incorporated in a *combined machine* (3.1)

#### 3.3

##### **dimension saw unit**

dimension saw incorporated in a *combined machine* (3.1)

Note 1 to entry: For the definition of dimension saws, see ISO 19085-5:2017, 3.1.

#### 3.4

##### **table saw unit**

table saw incorporated in a *combined machine* (3.1)

Note 1 to entry: For the definition of table saws, also called circular saw benches, see ISO 19085-9:2019, 3.1.