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Woodworking machines — Safety —

Part 15: Presses

Machines à bois — Sécurité —

Partie 15: Presses

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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 19085-15:2021), which has been technically revised. The main changes compared to the previous edition are as follows:

- the Scope has been revised to also cover presses with pneumatic or electrical actuators (not only hydraulic) and to specify that machines are intended for continuous production use;
- the list of significant hazards has been moved to new Annex A;
- the structure has been simplified and modified, in particular in 5.6;
- subclause 6.2 has been updated and the noise test code has been moved to Annex F;
- subclause 6.4 has been improved;
- subclause 6.17 on radiation has been added.

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.

Introduction

The ISO 19085 series 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 to be provided the user by the manufacturer.

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, 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 at 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.

This document is intended to be used in conjunction with ISO 19085-1:2021, which gives requirements common to the different woodworking machine types.

As far as possible, the safety requirements of parts of the ISO 19085 series refer to the relevant subclauses of ISO 19085-1:2021. Each part contains replacements and additions to the common requirements given in ISO 19085-1:2021.

Clauses 1 to 3 are specific to each part and, therefore, replace ISO 19085-1:2021, Clauses 1 to 3.

For Clauses 4 to 7 and Annexes A to F, each subclause of ISO 19085-1:2021, Clauses 4 to 7 and Annexes A to F can be:

— 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 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.”.

Woodworking machines — Safety —

Part 15: Presses

1 Scope

1.1 This document specifies the safety requirements and measures for

— cold presses,

— hot presses,

— bending presses,

— edge/face gluing presses,

— membrane presses, and

— embossing presses,

where the pressing force is applied by hydraulic, pneumatic or electrical actuators pushing two flat or shaped surfaces against each other, capable of continuous production use, altogether referred to as “machines”.

This document deals with all significant hazards, hazardous situations and events as listed in Annex A, relevant to 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 are taken into account.

1.2 This document is applicable to machines fitted with one or more of the following devices or additional working units, whose hazards have been dealt with:

a) a device for hot gluing;

b) a device for high-frequency gluing in the frequency range from 1 MHz to 400 MHz;

c) a device for high-frequency shaping in the frequency range from 1 MHz to 400 MHz;

d) an automatic workpiece loading and unloading system;

e) an intermediate additional platen;

f) a workpiece extractor;

g) a horizontal pressing system;

h) split moveable platens.

1.3 The machines are designed to process workpieces consisting of:

a) solid wood;

b) materials with similar characteristics to wood (see ISO 19085-1:2021, 3.2), except those with light alloy laminates/edges/profiles for high-frequency presses;

c) wood-based material such as chipboard, fibreboard and plywood composed/laminated with steel sheets/edges/profiles, except for high-frequency presses;

d) honeycomb board;

e) composite boards made from the materials listed above.

1.4 This document does not deal with any hazards related to:

— specific devices that differ from the list above;

— hot fluid heating systems internal to the machine other than electrical;

— any hot fluid heating systems external to the machine;

— operation of taking intermediate platens out and in again;

— the combination of a single machine being used with any other machine (as part of a line).

1.5 This document is not applicable to:

— frame presses;

— membrane presses where the pressing force is applied by vacuum only;

— presses for producing chipboard, fibreboard, OSB;

— machines intended for use in potentially explosive atmosphere;

— machines manufactured before the date of 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 7010:2019, *Graphical symbols — Safety colours and safety signs — Registered safety signs*

ISO 7010:2019/Amd 1:2020, *Graphical symbols — Safety colours and safety signs — Registered safety signs — Amendment 1*

ISO 7010:2019/Amd 2:2020, *Graphical symbols — Safety colours and safety signs — Registered safety signs — Amendment 2*

ISO 7010:2019/Amd 3:2021, *Safety colours and safety signs — Registered safety signs — Amendment 3*

ISO 7010:2019/Amd 4:2021, *Graphical symbols — Safety colours and safety signs — Registered safety signs — Amendment 4*

ISO 7010:2019/Amd 5:2022, *Graphical symbols — Safety colours and safety signs — Registered safety signs — Amendment 5*

ISO 7010:2019/Amd 6:2022, *Graphical symbols — Safety colours and safety signs — Registered safety signs — Amendment 6*

ISO 7010:2019/Amd 7:2023, *Graphical symbols — Safety colours and safety signs — Registered safety signs — Amendment 7*

ISO 7010:2019/Amd 8:2024, *Graphical symbols — Safety colours and safety signs — Registered safety signs — Amendment 8*

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

ISO 13850:2015, *Safety of machinery — Emergency stop function — Principles for design*

ISO 13855:2024, *Safety of machinery — Positioning of safeguards with respect to the approach speeds of parts of the human body*

ISO 19085-1:2021, *Woodworking machines — Safety — Part 1: Common requirements*

IEC 60204-1:2016, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements*

IEC 61310-1:2007, *Safety of machinery — Indication, marking and actuation — Part 1: Requirements for visual, acoustic and tactile signals*

IEC 62311:2019, *Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz to 300 GHz)*

EN 12198-1:2000+A1:2008, *Safety of machinery — Assessment and reduction of risks arising from radiation emitted by machinery — Part 1: General principles*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12100:2010, ISO 19085-1:2021 and the following apply.

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
cold press
machine used to laminate or join together flat panels, or both, in which the pressing force is applied by hydraulic, pneumatic or electrical actuators pushing two cold flat platens against each other

Note 1 to entry: The moveable platen can be the top or the bottom one or both. Examples of different machine designs are illustrated in Figures 1 and 2 (safeguarding devices are not fully illustrated).

Note 2 to entry: The following devices can be provided:

— automatic panel loading and unloading;

— split moveable platens (see Figure 14).

3.2
hot press
machine used to laminate or join together flat panels, or both, in which the pressing force is applied by hydraulic actuators pushing two hot flat platens against each other

Note 1 to entry: The moveable platen can be the top or the bottom one or both. Examples of different machine designs are illustrated in Figures 1 and 2 (safeguarding devices are not fully illustrated).

Note 2 to entry: The following devices can be provided:

— automatic panel loading and unloading;

— intermediate additional platens (see Figure 3).

Note 3 to entry: Platens heating systems can be by electrical resistance or hot fluid (e.g. diathermic oil, water). Fluid heating system can be internal to the machine or external.

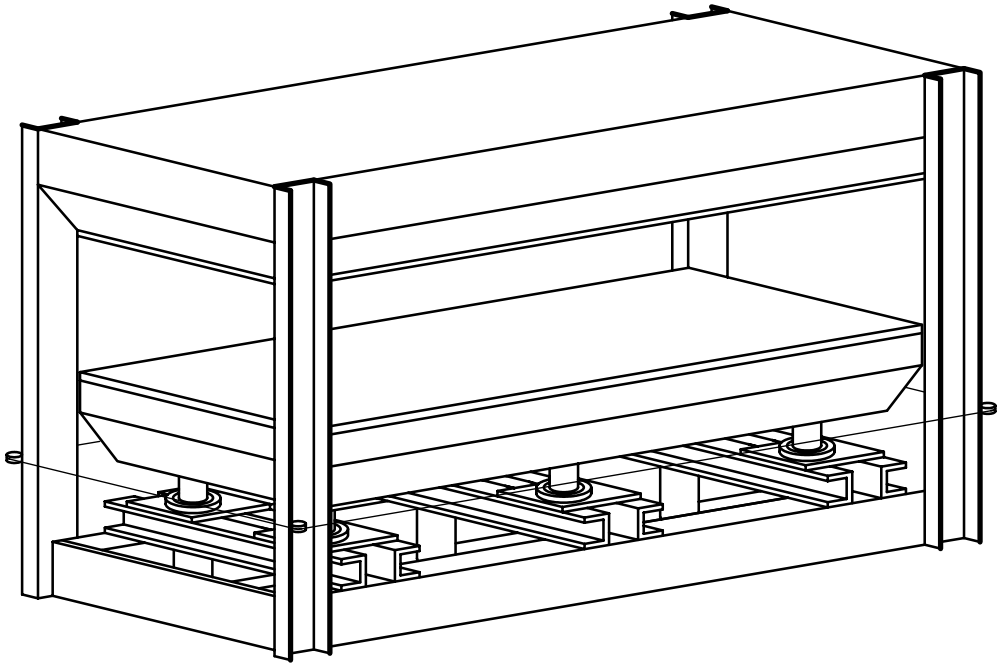

Figure 1 — Example of a cold or hot press with bottom actuators

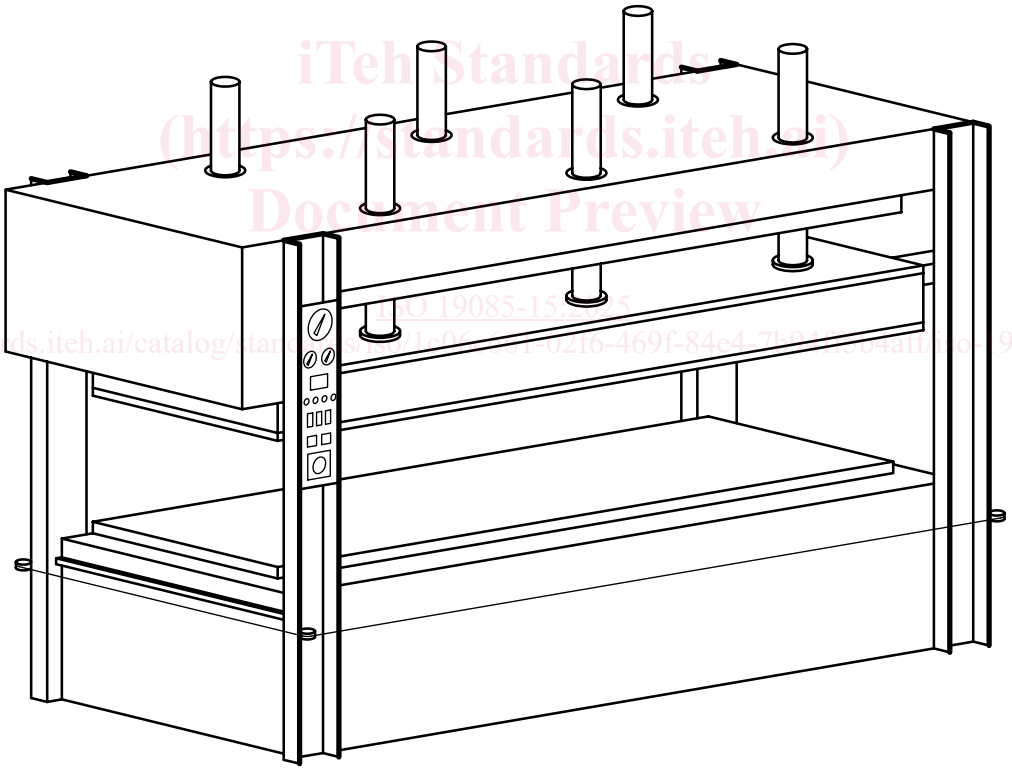

Figure 2 — Example of a cold or hot press with top actuators