

Graphic technology - Safety requirements for graphic technology equipment and systems - Part 3: Binding and finishing equipment and systems (ISO 12643-3:2023)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN ISO 12643-3:2023 sisaldab Euroopa standardi EN ISO 12643-3:2023 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 13.12.2023.</p> <p>Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN ISO 12643-3:2023 consists of the English text of the European standard EN ISO 12643-3:2023.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 13.12.2023.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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English Version

Graphic technology - Safety requirements for graphic technology equipment and systems - Part 3: Binding and finishing equipment and systems (ISO 12643-3:2023)

Technologie graphique - Exigences de sécurité pour les systèmes et l'équipement de technologie graphique - Partie 3: Systèmes et équipement de reliure et de finissage (ISO 12643-3:2023)

Graphische Technik - Sicherheitsanforderungen an Ausrüstungen und Systeme der graphischen Technik - Teil 3: Ausrüstungen und Systeme in der Buchbinderei und Druckweiterverarbeitung (ISO 12643-3:2023)

This European Standard was approved by CEN on 19 November 2023.

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CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

This document (EN ISO 12643-3:2023) has been prepared by Technical Committee ISO/TC 130 "Graphic technology" in collaboration with Technical Committee CEN/TC 198 "Printing and paper machinery - Safety" the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2024, and conflicting national standards shall be withdrawn at the latest by June 2026.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1010-3:2002+A1:2009 and EN 1010-4:2004+A1:2009.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 12643-3:2023 has been approved by CEN as EN ISO 12643-3:2023 without any modification.

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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 130, *Graphic technology*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 198, *Printing and paper machinery — Safety*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and the second edition (ISO 12643-3:2010), which has been technically revised.

The main changes are as follows:

- in [5.2](#), requirements for interlocks have been included (specific clause in ISO 12643-1 has been deleted);
- in [5.3.4](#), requirements for residual pile monitoring as a safety device on hopper feeders have been revised
- in [5.4.4](#), requirements on feeders and feeding sections at gathering machines have been added;
- in [5.4.4.4](#), requirements for residual pile monitoring as a safety device on feeders at gathering machines have been revised
- in [5.4.5](#), the requirements on safety-related control systems for temperature control and temperature monitoring in the gluing unit at perfect binders have been revised;
- in [5.4.5.7](#), requirements for safeguarding milling head cutters at perfect binders have been added;
- in [5.4.5.9](#), requirements for emergency stop at perfect binders have been added;
- requirements related to hazards dealt with in ISO 12643-1 have been deleted throughout the document (inclusion in the list of significant hazards);

- in [5.4.5](#), the requirements on safety-related control systems for temperature control and temperature monitoring in the gluing section for hardcover lines have been revised;
- in [5.9.2](#), requirements for retraction of knife and clamp at guillotine cutters have been added;
- in [5.9.6](#); [Figures 29](#) and [30](#) on guillotine cutters have been revised (30 mm added)
- the formula for the calculation of the minimum safety distance at guillotine cutters has been moved to A.1 as it also refers to the new [subclause 5.11](#);
- a new [subclause 5.11](#), Three-knife trimmers with manual infeed, has been added;
- in [Clause 6](#), the table for the verification of the safety requirements and/or protective/risk reduction measures has been added;
- the list of significant hazards has been moved to [Annex B](#);
- a reference to ISO 13849-2 has been added in Bibliography.

This document is intended to be used in conjunction with ISO 12643-1:2023.

A list of all parts in the ISO 12643 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

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.

During the development of this document, existing relevant standards of other countries were taken into consideration. In cases where it was known that there is a national requirement that differs from this document, that has been noted.

The full set of requirements for graphic technology equipment and systems are those given in the part of ISO 12643 applicable to that type, together with the relevant requirements from ISO 12643-1:2023, to the extent specified in the Scope of the applicable part of ISO 12643.

This document supplements and modifies the general requirements of ISO 12643-1:2023. Where a requirement of this document conflicts with a requirement of ISO 12643-1:2023 the requirement of this document will take precedence.

Graphic technology — Safety requirements for graphic technology equipment and systems —

Part 3: Binding and finishing equipment and systems

1 Scope

This document provides safety requirements specific to binding and finishing equipment and systems. It provides additional safety requirements for the design and construction of new equipment used to convert printed or blank substrates into cut, folded, collated, assembled, bound, or otherwise finished product.

This document is applicable to processes for preparing substrate for the printing process. It is also applicable to a wide range of equipment used in the binding and finishing process.

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 12643-1:2023, *Graphic technology — Safety requirements for graphic technology equipment and systems — Part 1: General requirements*

ISO 13849-1:2023, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design*

ISO 13857:2019, *Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs*

ISO 14119:2013, *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection*

ISO 14120:2015, *Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards*

ISO 14123-1:2015, *Safety of machinery — Reduction of risks to health resulting from hazardous substances emitted by machinery — Part 1: Principles and specifications for machinery manufacturers*

ISO 14123-2:2015, *Safety of machinery — Reduction of risks to health resulting from hazardous substances emitted by machinery — Part 2: Methodology leading to verification procedures*

IEC 62061:2021, *Safety of machinery — Functional safety of safety-related electrical, electronic and programmable electronic control systems*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12643-1:2023, ISO 13849-1:2023 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>