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

Part 2: Prepress and press equipment and systems

Technologie graphique — Exigences de sécurité pour les systèmes et l'équipement de technologie graphique —

Partie 2: Systèmes et équipement pour la préimpression et la presse



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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.

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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 replaces the second edition (ISO 12643-2:2010), which has been technically revised. The main changes compared to the previous edition are as follows:

- in [3.13](#), a definition for large-format inkjet digital printing machines has been added;
- in [6.2.2](#), the exemption for the maximum height of the feed opening has been deleted;
- in [6.2.3](#), new requirements in relation with in-running nips on anilox rollers ([6.2.3.5](#)) and cylinders/rollers in gravure printing presses ([6.2.3.6](#)) have been added;
- in [6.3](#), requirements for interlocks have been added;
- in [6.3](#), requirements for the movement of the inkjet heads when closing a protective device ([6.3.4](#)) have been added;
- in [6.6.1.3](#), the requirements for securing whole body access on deliveries have been adapted from the new requirements in ISO 12643-4:2023;
- in [6.6](#), the requirements for the protection of the pile carrier for heights above 800 mm have been deleted and newly regulated in ISO 12643-1:2023);
- in [Clause 7](#), requirements for automatic and semi-automatic printing plate changing have been revised;
- in [8.2](#) and [8.3](#), the requirements for fire and explosion protection have been revised

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- in [8.3.2](#), [8.3.3](#), [8.7.2](#), [8.7.3](#), [15.9](#) and [B.6.2.2.2](#), flash point to Globally Harmonised System (GHS, flammable liquids 60 °C) have been adapted;
- addition of [8.12](#) and [15.11](#) with requirements for large-format inkjet digital printing machines (wide-format inkjet digital printing machines)
- a new [subclause 8.13](#) on dust protection requirements for web offset printing presses has been added;
- a new [subclause 8.14](#) on Emergency stop devices and stop/safe pushbuttons at stationary control stands of web offset printing presses has been added;
- the clause on alternative controls for stop/safe function on sheet-fed presses has been deleted;
- in [9.4](#), a requirement for inkjet printing systems in connection with emergency stop has been added;
- the clause on colours for manual controls has been deleted;
- the list of significant hazards has been moved to an informative [Annex A](#);
- the annex on protection zones against explosion has been moved to ISO 12643-1:2023;
- in [Annex B](#), the following have been adapted:
 - selected measurement locations for the measurement of emissions of ink mist, varnish mist, ammonia, VOC IPA, VOC hydrocarbon compounds;
 - the limit value for ammonia at measurement location 2;
 - the measurement conditions for VOC IPA (6 % IPA in dampening water), VOC hydrocarbon compounds (measurement during entire washing program).

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 and [Clause 5](#) 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 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.