

# SVENSK STANDARD

## SS-EN 1010-4:2004+A1:2009

Fastställt/Approved: 2009-10-26

Publicerad/Published: 2009-11-18

Utgåva/Edition: 1

Språk/Language: engelska/English

ICS: 14.310; 37.100.10; 85.100

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### **Maskinsäkerhet – Säkerhetskrav för konstruktion och tillverkning av maskiner för tryckning, bokbinderi och förpackningstillverkning – Del 4: Maskiner för bokbinderi, papperskonvertering och färdigframställning**

### **Safety of machinery – Safety requirements for the design and construction of printing and paper converting machines – Part 4: Bookbinding, paper converting and finishing machines**

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Denna standard ersätter SS-EN 1010-4:2004, utgåva 1.

The European Standard EN 1010-4:2004+A1:2009 has the status of a Swedish Standard. This document contains the official English version of EN 1010-4:2004+A1:2009.

This standard supersedes the Swedish Standard SS-EN 1010-4:2004, edition 1.

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 1010-4:2004+A1**

October 2009

ICS 37.100.10; 85.100

Supersedes En 1010-4:2004

English Version

**Safety of machinery - Safety requirements for the design and construction of printing and paper converting machines - Part 4: Bookbinding, paper converting and finishing machines**

Sécurité des machines - Exigences de sécurité pour la conception et la construction de machines d'impressions et de transformation du papier - Partie 4: Machines à relier les livres, machines de transformation et de finition du papier

Sicherheit von Maschinen - Sicherheitsanforderungen an Konstruktion und Bau von Druck- und Papierverarbeitungs- und Papierveredelungsmaschinen - Teil 4: Buchbinderei, Papierverarbeitungs- und Papierveredelungsmaschinen

This European Standard was approved by CEN on 21 November 2003 and includes Amendment 1 approved by CEN on 15 September 2009.

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

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## Foreword

This document (EN 1010-4:2004+A1:2009) has been prepared by 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 April 2010, and conflicting national standards shall be withdrawn at the latest by April 2010.

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

This document includes Amendment 1 approved by CEN on 2009-09-15.

This document supersedes EN 1010-4:2004.

The start and finish of text introduced or altered by amendment is indicated in the text by tags  $\boxed{A_1}$   $\boxed{A_1}$ .

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

$\boxed{A_1}$  For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document.  $\boxed{A_1}$

Annex A of this standard is normative.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



## Introduction

This document is a type C standard as stated in EN 1070. It defines additional safety requirements and/or deviations from the stipulations in **EN 1010-1:2004+A1**.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this document.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of the other standards for machines that have been designed and built according to the provisions of this C standard.

The EN 1010 series of standards consists of the following parts:

- Part 1 Common requirements
- Part 2 Printing and varnishing machines including pre-press machinery
- Part 3 Cutting machines
- Part 4 Bookbinding, paper converting and finishing machines
- Part 5 Machines for the production of corrugated board and machines for the conversion of flat and corrugated board

## 1 Scope

This document applies to

- bookbinding machines:
  - stitching, riveting, eyeletting and attaching machines;
  - gang stitchers;
  - gathering machines;
  - perfect binders;
  - paper drills;
  - book signature presses;
  - book presses;
  - sheet folding machines;
  - book production lines for the production of books with hard covers;
  - back rounding and pressing machines;

- backlining and head banding machines;
- casing-in machines;
- book cover crease forming machines.
- paper converting machines:
  - machines for the production of envelopes;
  - machines for the production of sanitary items;
  - inserting machines;
  - counter-stackers;
  - paper embossing machines.
- paper finishing machines:
  - coaters;
  - laminators.

This document shall be used together with [EN 1010-1:2004+A1](#). Both parts together identify all significant hazards relevant to bookbinding, paper converting and paper finishing machines when they are used as intended and under the conditions foreseen by the manufacturer (see clause 4). The specific requirements in EN 1010-4 take precedence over respective requirements in [EN 1010-1:2004+A1](#).

This document does not deal with risks generated by noise emitted from the machines. These issues are covered basically in [EN 1010-1:2004+A1](#). However, for machines like sheet folding machines and machines for the production of envelopes and sanitary items, some specific proposals for noise reduction measures are given.

This document is not applicable to bookbinding, paper converting and finishing machines manufactured before the date of publication of this document by CEN.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 292-1:1991, *Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology.*

EN 292-2:1991+A1:1995, *Safety of machinery — Basic concepts, general principles for design — Part 2: Technical principles and specifications.*

EN 294:1992, *Safety of machinery — Safety distances to prevent danger zones being reached by the upper limbs.*

EN 349:1993, *Safety of machinery — Minimum gaps to avoid crushing of parts of the human body.*

EN 626-1:1994, *Safety of machinery — Reduction of risks to health from hazardous substances emitted by machinery — Part 1: Principles and specifications for machinery manufacturers.*

EN 626-2:1996, *Safety of machinery — Reduction of risks to health from hazardous substances emitted by machinery — Part 2: Methodology leading to verification procedures.*

EN 954-1:1996, *Safety of machinery — Safety related parts of control systems. Part 1: General principles for design.*

EN 1010-1:2004+A1, *Safety of machinery — Safety requirements for the design and construction of printing and paper converting machines — Part 1: Common requirements.*

prEN 1010-2:2003, *Safety of machinery — Safety requirements for the design and construction of printing and paper converting machines — Part 2: Printing and varnishing machines including pre-press machinery.*

EN 1010-3:2002, *Safety of machinery — Safety requirements for the design and construction of printing and paper converting machines — Part 3: Cutting machines.*

EN 1050:1996, *Safety of machinery — Principles for risk assessment.*

EN 1070:1998, *Safety of machinery — Terminology.*

EN 1539:2000, *Dryers and ovens in which flammable substances are released — Safety requirements.*

prEN 13023, *Noise measurement methods for printing, paper converting, paper making machines and auxiliary equipment — Accuracy categories 2 and 3.*

EN 61000-6-4:2002, *Electromagnetic compatibility (EMC) — Generic standards — Part 6-4: Emission standard for industrial environment (IEC 61000-6-4:1997).*

EN ISO 4871, *Acoustics — Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996).*

### 3 Terms and definitions

For the purposes of this European Standard, the definitions given in EN 1070:1998 and EN 1010-1:2004+A1 and the following apply.

#### 3.1

##### **stitching, riveting, eyeletting and attaching machines**

powered machines using tools for

— connecting material by means of metallic items

or

— positively fixing metallic items to material

#### 3.2

##### **gang stitchers**

machines for stitching folded sheets of paper where individual folded sheets are removed by feeding grippers and the open sheets are stacked on top of each other on a transport chain for subsequent back stitching (see Figure 1)