

**Safety of machinery - Safety requirements for the design and construction of paper making and finishing machines - Part 5: Sheetters**

Safety of machinery - Safety requirements for the design and construction of paper making and finishing machines - Part 5: Sheetters

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1034-5:2006 sisaldab Euroopa standardi EN 1034-5:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 27.02.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1034-5:2006 consists of the English text of the European standard EN 1034-5:2005.</p> <p>This document is endorsed on 27.02.2006 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b> This European Standard applies to sheeters, including unwinding units, sheet stacker, drive and control units intended for use in paper making and shall be used together with EN 1034-1:2000. Paper dust and edge strip suction devices are not covered by this standard.</p>	<p><b>Scope:</b> This European Standard applies to sheeters, including unwinding units, sheet stacker, drive and control units intended for use in paper making and shall be used together with EN 1034-1:2000. Paper dust and edge strip suction devices are not covered by this standard.</p>
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English Version

## Safety of machinery - Safety requirements for the design and construction of paper making and finishing machines - Part 5: Sheeters

Sécurité des machines - Exigences techniques de sécurité pour la conception et la construction de machines de fabrication et de finition du papier - Partie 5: Coupeuses

Sicherheit von Maschinen - Sicherheitstechnische Anforderungen an Konstruktion und Bau von Maschinen der Papierherstellung und Ausrüstung - Teil 5: Querschneider

This European Standard was approved by CEN on 10 November 2005.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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## Foreword

This document EN 1034-5:2005 has been prepared by Technical Committee CEN/TC 198 "Printing and paper machinery - Safety", the secretariat of which is held by DIN.

This document shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2006, and conflicting national standards shall be withdrawn at the latest by June 2006.

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)**.

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

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

## Introduction

This European Standard is a type C standard as stated in EN ISO 12100-1.

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

For machines that have been designed and built according to the provisions of this type C standard, the following stipulation applies: when provisions of this type C standard are different from those which are stated in type A or B standards or from provisions made in EN 1034-1:2000, the provisions of this type C standard take precedence over the provisions of the other standards

## 1 Scope

This European Standard applies to sheeters, including unwinding units, sheet stacker, drive and control units intended for use in paper making and shall be used together with EN 1034-1:2000. Paper dust and edge strip suction devices are not covered by this standard. It deals with all significant hazards, hazardous situations and hazard events relevant to sheeters, when they are used as intended and under the conditions foreseen by the manufacturer (see clause 4). This standard does not apply to:

- sheeters for corrugated board (see EN 1010-5);
- sheeters for foil (see EN 1010-1);
- sheeters with sheet feeders (see EN 1010-1);
- guillotines (see EN 1010-3:2002).

This document is not applicable to sheeters that have been manufactured before the date of publication of this document by CEN.

## 2 Normative references

The following referenced documents are indispensable for the application 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

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 418:1992, *Safety of machinery — Emergency stop equipment, functional aspects — Principles for design*

EN 563:1994 *Safety of machinery — Temperatures of touchable surfaces — Ergonomics data to establish temperature limit values for hot surfaces*

EN 574:1996, *Safety of machinery — Two-hand control devices — Functional aspects — Principles for design*

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

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

EN 811:1996, *Safety distances to prevent danger zones being reached by the lower limbs*

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

EN 982:1996, *Safety of machinery — Safety requirements for fluid power systems and their components — Hydraulics*

EN 983:1996, *Safety of machinery — Safety requirements for fluid power systems and their components — Pneumatics*

EN 999:1998, *Safety of machinery — The positioning of protective equipment in respect of approach speeds of parts for the human body*

EN 1034-1:2000, *Safety of machinery — Safety requirements for the design and construction of paper making and finishing machines — Part 1: Common requirements*

EN 1037:1995, *Safety of machinery — Prevention of unexpected start-up*

EN 1050:1998, *Safety of machinery — Principles for risk assessment*

EN 1088:1995, *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection*

EN 1760-1:1997, *Safety of machinery — Pressure sensitive devices — Part 1: General principles for the design and testing of pressure sensitive mats and pressure sensitive floors*

EN 1760-2:2001, *Safety of machinery — Pressure sensitive devices — Part 2: General principles for the design and testing of pressure sensitive edges and pressure sensitive bars*

EN 1837:1999, *Safety of machinery — Integral lighting of machines*

EN 13023:2003, *Noise measurement methods for printing, paper converting, paper making machines and auxiliary equipment — Accuracy categories 2 and 3*

EN 60204-1:1997, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements (IEC 60204-1:1997)*

EN 61000-6-2:2001, *Electromagnetic compatibility (EMC) — Part 6-2: Generic standards; immunity for industrial environment (IEC 61000-6-2:1999, modified)*

EN 61496-1:2004, *Safety of machinery — Electro-sensitive protective equipment — Part 1: General requirements and tests (IEC 61496-1:2004, modified)*

EN ISO 12100-1:2003, *Safety of machinery — Basic concepts — General principles for design — Part 1: Basic terminology, methodology (ISO 12100-1:2003)*

EN ISO 12100-2:2003, *Safety of machinery — Basic concepts — General principles for design — Part 2: Technical principles and specifications (ISO 12100-2:2003)*

EN ISO 14122-1:2001, *Safety of machinery — Permanent means of access to machinery — Part 1: Choice of a fixed means of access between two levels (ISO 14122-1:2001)*

EN ISO 14122-2:2001, *Safety of machinery — Permanent means of access to machinery — Part 2: Working platforms and gangways (ISO 14122-2:2001)*

EN ISO 14122-3:2001, *Safety of machinery — Permanent means of access to machinery — Part 3: Stair, stepladders and guard-rails (ISO 14122-3:2001)*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1034-1:2000, EN ISO 12100-1:2003 and the following apply:

#### 3.1

##### **sheeter**

paper making and finishing machine in which paper or board webs are cut longitudinally and transversely and the sheets are collected as stacks. This definition also includes sheeters without unwinding units in which the paper web is fed directly from a paper or coating machine. Figure 1 and Figure 2 show examples of sheeters. Figure 1 shows a typical configuration of a sheeter for large sizes with two sheet feeders. Figure 2 shows an example of a sheeter for small sizes with two unwinding units

#### 3.2

##### **sheet delivery unit**

final section of a sheeter, designed as a lowering table delivery unit with lifting platform according to 3.3 or as a movable sheet delivery unit according to 3.4, for collecting and stacking the sheets (see Figure 1)

#### 3.3

##### **lifting platform**

platform movable in the vertical direction with which the sheets are formed into stacks on pallets in the lowering movement

#### 3.4

##### **movable sheet delivery unit**

device for conveying and lifting the paper sheets to form stacks on pallets