

Jalatsi-, naha- ja kunstnahast toodete valmistamise masinad. Lõhkumis-, kaapimis-, lõikamis-, tsementimis- ja tsemendikuivatusmasinad. Ohutusnõuded

Footwear, leather and imitation leather goods manufacturing machines - Splitting, skiving, cutting, cementing and cement drying machines - Safety requirements

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 13457:2004+A1:2010 sisaldab Euroopa standardi EN 13457:2004+A1:2010 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 30.06.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 28.04.2010.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 13457:2004+A1:2010 consists of the English text of the European standard EN 13457:2004+A1:2010.

This standard is ratified with the order of Estonian Centre for Standardisation dated 30.06.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 28.04.2010.

The standard is available from Estonian standardisation organisation.

ICS 59.140.40, 61.060

Standardite reprodutseerimis- ja levitamiseõigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:
Aru 10 Tallinn 10317 Eesti; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee

Right to reproduce and distribute Estonian Standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation:
Aru str 10 Tallinn 10317 Estonia; www.evs.ee; Phone: +372 605 5050; E-mail: info@evs.ee

English Version

**Footwear, leather and imitation leather goods manufacturing
machines - Splitting, skiving, cutting, cementing and cement
drying machines - Safety requirements**

Machines de fabrication de chaussures et d'articles en cuir
et en matériaux similaires - Machines à refendre, à parer, à
couper, à encoller et à sécher l'adhésif - Prescriptions de
sécurité

Maschinen zur Herstellung von Schuhen, Leder- und
Kunstlederwaren - Spalt-, Schärf-, Schneid-,
Klebstoffauftrag- und Klebstofftrockenmaschinen -
Sicherheitsanforderungen

This European Standard was approved by CEN on 8 August 2004 and includes Amendment 1 approved by CEN on 18 March 2010.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

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 CEN Management Centre has the same status as the official versions.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.





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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

	page
Foreword.....	4
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	9
4 Ⓐ List of significant hazards Ⓐ	10
5 Safety requirements and/ Ⓐ or protective measures Ⓐ	26
5.1 General principles.....	26
5.2 Common requirements for all machines within the scope	26
5.2.1 Mechanical equipment	26
5.2.2 Electrical equipment.....	27
5.2.3 Thermal protection	27
5.2.4 Protection against fire.....	27
5.2.5 Noise control at the design state	28
5.2.6 Fumes and dust detrimental to health.....	28
5.2.7 Ergonomics	28
5.2.8 Pressurized fluid systems	29
5.2.9 Control systems.....	29
5.2.10 Additional safety devices.....	30
5.2.11 Aids for transportation.....	30
5.3 Additional requirements for specific machines	30
5.3.1 Splitting machines (see Figure 1)	30
5.3.2 Skiving machines (Figure 2).....	31
5.3.3 Cutting machines (Figures 3 and 4).....	31
5.3.4 Strip cutting machines (Figure 5).....	31
5.3.5 Cementing machines (Figures 6, 7, 8, 9, 10 and 11).....	31
5.3.6 Cement drying machines (Figure 12).....	32
6 Ⓐ Verification of safety requirements and/or protective measures Ⓐ	33
7 Information for use	40
7.1 General.....	40
7.2 Signal and warning devices.....	40
7.3 Instruction handbook (operating manual)	40
7.4 Declared noise emission values	41
7.5 Ⓐ Marking Ⓐ	41
Annex A (normative) Requirements for guards.....	43
Annex B (normative) Requirements for interlocking guards	45
Annex C (normative) Requirements for trip device.....	46
Annex D (normative) Requirements for hold-to-run control device	49
Annex E (normative) Noise test code for splitting-, skiving-, cutting-, cementing- and cement drying machines	51
Annex F (normative) Prevention against explosions.....	54
Annex G (normative) Requirements for pressure sensitive mats and floors.....	56
Annex H (normative) Temperatures of burn threshold.....	57
Annex I (normative) Requirements for control guards (interlocking guard with start function).....	58
Annex J (informative) Splitting machines: Safety devices for feeding and processing area.....	59

Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC	60
Annex ZB (informative)  Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC 	61

This document is a preview generated by EVS

Foreword

This document (EN 13457:2004+A1:2010) has been prepared by Technical Committee CEN/TC 201 “Leather and imitation leather goods and footwear manufacturing machinery - Safety”, the secretariat of which is held by UNI.

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 October 2010, and conflicting national standards shall be withdrawn at the latest by October 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 2010-03-18.

This document supersedes EN 13457:2004.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** **A1**.

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 Directives.

A1 For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. **A1**

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

A1 deleted text **A1**

This document is a type C standard as stated in **A1** EN ISO 12100 **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 and B standards, the provisions of this type C standard take precedence over the provisions of the other standards, for information for use and maintenance according to the provisions of this type C standard.

A1 deleted text **A1**

1 Scope

1.1 This document applies to splitting, skiving, edge trimming, strip cutting, cementing and cement drying machines used in the manufacture of footwear, leather and imitation leather goods and other related components.

1.2 This document does not apply to:

- trimming machines with rotary milling tool for the purpose of trimming edges of material, see EN 930;
- splitting and band knife machines used in tanneries, see EN 13112;
- portable machines.

1.3 This document specifies safety requirements for construction, transport, installation, adjustment, setting, teaching or process change-over, operation, cleaning, maintenance, decommissioning, dismantling and, as far as safety is concerned, disposal for machines mentioned in 1.1.

It takes account of intended use ^{A1}, foreseeable misuse ^{A1}, component and system failure.

1.4 This document deals with significant hazards relevant to the footwear, leather and imitation leather goods manufacturing industries. (For a list of hazards see Clause 4.)

The document does not deal with precise technical measures for reducing the risks of fumes and dusts detrimental to health.

The use of machines falling within the scope of this document for purposes other than those specified in 1.1, may give rise to hazards not considered during its preparation.

1.5 This document also applies to equipment for material handling and operations which are an integral part of the machine.

1.6 This document assumes the machines

- are operated by adequately trained persons
- are used with adequate workplace lighting conforming the local regulations or to EN 12464-1. ^{A1} deleted text ^{A1}

1.7 ^{A1} This document is not applicable to splitting, skiving, edge trimming, strip cutting, cementing and cement drying machines which are manufactured before the date of its publication as EN. ^{A1}

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.

^{A1} deleted text ^{A1}

^{A1} EN 349:1993 ^{A1}, *Safety of machinery — Minimum gaps to avoid crushing of parts of the human body*

^{A1} deleted text ^{A1}

^{A1} EN 547-1:1996 ^{A1}, *Safety of machinery – Human body measurements – Part 1: Principles for determining the dimensions required for openings for whole body access into machinery*

EN 547-2:1996 ^{A1}, *Safety of machinery – Human body measurements – Part 2: Principles for determining the dimensions required for access openings*

^{A1} deleted text ^{A1}

EN 614-1:2006 ^{A1}, *Safety of machinery – Ergonomic design principles – Part 1: Terminology and general principles*

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 risk to health from hazardous substances emitted by machinery – Part 2: Methodology leading to verification procedures* ^{A1}

^{A1} deleted text ^{A1}

EN 894-2:1997 ^{A1}, *Safety of machinery – Ergonomics requirements for the design of displays and control actuators – Part 2: Displays*

EN 894-3:2000 ^{A1}, *Safety of machinery – Ergonomics requirements for the design of displays and control actuators – Part 3: Control actuators*

EN 953:1997, *Safety of machinery – Guards – General requirements for the design and construction of fixed and movable guards*

^{A1} deleted text ^{A1}

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 ^{A1}, *Safety of machinery – The positioning of protective equipment in respect of approach speeds of parts of the human body*

EN 1005-2:2003, *Safety of machinery – Human physical performance – Part 2: Manual handling of machinery and component parts of machinery*

EN 1005-3:2002, *Safety of machinery – Human physical performance – Part 3: Recommended force limits for machinery operation*

EN 1037:1995 ^{A1}, *Safety of machinery – Prevention of unexpected start-up*

^{A1} deleted text ^{A1}

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

EN 1127-1:2007 ^{A1}, *Explosive atmospheres – Explosion prevention and protection – Part 1: Basic concepts and methodology*

EN 1760-1:1997 ^{A1}, *Safety of machinery – Pressure sensitive protective devices – Part 1: General principles for the design and testing of pressure sensitive mats and pressure sensitive floors*

EN 1760-2:2001 ^{A1}, *Safety of machinery – Pressure sensitive protective devices – Part 2: General principles for the design and testing of pressure sensitive edges and pressure sensitive bars*

EN 12464-1:2002 ^{A1}, *Light and lighting – Lighting of work places – Part 1: Indoor work places*

[A1] deleted text **[A1]**

EN 12545:2000, *Footwear, leather and imitation leather goods manufacturing machines – Noise test code – Common requirements*

[A1] EN 13478:2001 **[A1]**, *Safety of machinery – Fire prevention and protection*

[A1] EN 60204-1:2006, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements (IEC 60204-1:2005 (modified))* **[A1]**

EN 60335-2-69:2003, *Household and similar electrical appliances – Safety – Part 2-69: Particular requirements for wet and dry vacuum cleaners, including power brush, for industrial and commercial use (IEC 60335-2-69:2002, modified)*

EN 60947-5-1:2004, *Low-voltage switchgear and controlgear – Part 5-1: Control circuit devices and switching elements – Electromechanical control circuit devices (IEC 60947-5-1:2003)*

[A1] EN 61310-1, *Safety of machinery – Indication, marking and actuation – Part 1: Requirements for visual, acoustic and tactile signals (IEC 61310-1:2007)* **[A1]**

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

[A1] CLC/TS 61496-2:2006, *Safety of machinery – Electro-sensitive protective equipment – Particular requirements for equipment using active opto-electronic protective devices (AOPDs) (IEC 61496-2:2006)* **[A1]**

[A1] deleted text **[A1]**

[A1] EN ISO 11688-1:2009 **[A1]**, *Acoustics – Recommended practice for the design of low-noise machinery and equipment – Part 1: Planning (ISO/TR 11688-1:1995)*

EN ISO 11688-2:2000, *Acoustics – Recommended practice for the design of low-noise machinery and equipment – Part 2: Introduction to the physics of low-noise design (ISO/TR 11688-2:1998)*

[A1] EN ISO 11689:1996 **[A1]**, *Acoustics – Procedure for the comparison of noise-emission data for machinery and equipment (ISO 11689:1996)*

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 (ISO 12100-2:2003)*

[A1] EN ISO 13732-1:2008, *Ergonomics of the thermal environment — Methods for the assessment of human responses to contact with surfaces — Part 1: Hot surfaces (ISO 13732-1:2006)* **[A1]**

[A1] EN ISO 13849-1:2008, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design (ISO 13849-1:2006)* **[A1]**

[A1] EN ISO 13850:2008, *Safety of machinery — Emergency stop — Principles for design (ISO 13850:2006)* **[A1]**

[A1] EN ISO 13857:2008, *Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2008)* **[A1]**

[A1] EN ISO 14122-1:2001 **[A1]**, *Safety of machinery – Permanent means of access to machinery – Part 1: Choice of 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 walkways (ISO 14122-2:2001)*