

**Jalatsi-, naha- ja kunstnahast toodete
valmistamise masinad. Jalatsi- ja
nahapressid. Ohutusnõuded**

Footwear, leather and imitation leather goods
manufacturing machines - Shoe and leather presses
- Safety requirements

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12203:2003 sisaldab Euroopa standardi EN 12203:2003 + AC:2006 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 17.09.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 12203:2003 consists of the English text of the European standard EN 12203:2003 + AC:2006.</p> <p>This document is endorsed on 17.09.2003 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>
--	---

<p>Käsitlusala: This European Standard is applicable to shoe and leather presses (see 3.1) used in the manufacture of footwear, leather and imitation leather goods and other related components. These machines are:- Sole attaching presses (open and closed types); - Sole and insole moulding machines;- Back part moulding machines;- Backer, lining and toe puff attaching presses;- Ironing presses</p>	<p>Scope: This European Standard is applicable to shoe and leather presses (see 3.1) used in the manufacture of footwear, leather and imitation leather goods and other related components. These machines are:- Sole attaching presses (open and closed types); - Sole and insole moulding machines;- Back part moulding machines;- Backer, lining and toe puff attaching presses;- Ironing presses</p>
---	---

ICS 59.140.40, 61.080

Võtmesõnad: a, definitions, leather industry, leather-working equipment, leather-working machines, mechanical engineering, presses, protection against danger, safety, safety requirements, shoe machinery, shoe machines, specification, specification (approval), specifications

ICS 59.140.40; 61.080

English version

Footwear, leather and imitation leather goods manufacturing machines - Shoe and leather presses - Safety requirements

Machines pour la fabrication des chaussures et articles chaussants en cuir et matériaux similaires - Presses pour la fabrication de chaussures et articles en cuir - Sécurité

Maschinen zur Herstellung von Schuhen, Leder- und Kunstlederwaren - Schuh- und Lederpressen - Sicherheitsanforderungen

This European Standard was approved by CEN on 1 November 2002.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

	page
Foreword.....	4
Introduction	5
1 Scope	6
2 Normative references	7
3 Terms and definitions.....	9
4 List of Hazards	12
5 Safety requirements and/or measures	34
5.1 Common requirements for all shoe and leather presses	34
5.1.1 Mechanical Equipment.....	34
5.1.2 Additional safety devices.....	36
5.1.3 Electrical equipment.....	36
5.1.4 Thermal protection	36
5.1.5 Noise control at the design stage	37
5.1.6 Fumes detrimental to health.....	37
5.1.7 Ergonomics	37
5.1.8 Pressurized fluid systems.....	38
5.1.9 Control systems.....	38
5.1.10 Tool setting and adjustment.....	39
5.1.11 Feeding system.....	40
5.1.12 Aids for transportation.....	41
5.2 Specific requirements for particular types of shoe and leather presses.....	41
5.2.1 Sole attaching presses.....	41
5.2.2 Sole and insole moulding machines.....	41
5.2.3 Back part moulding machine.....	42
5.2.4 Backer, lining and toe puff attaching machines.....	42
5.2.5 Ironing presses with rotary table	42
5.2.6 Marking, stamping, labelling and embossing machines	42
5.2.7 Stitch marking machines	42
5.2.8 Upper preforming machines.....	42
5.2.9 Automatic shoe and leather presses	43
5.2.10 Folding presses.....	44
5.2.11 Activating presses	44
5.2.12 Relasting and last slipping machines.....	44
5.2.13 Top piece attaching presses.....	44
5.2.14 Leather button covering machine	44
6 Verification.....	45
7 Information for use	55
7.1 Instruction handbook (operating manual).....	55
7.2 Declared noise emission values.....	56
7.3 Minimum marking	56
Annex A (normative) Requirements for guards	57
A.1 Fixed covers	57
A.2 Movable enclosing guards and movable covers	57
A.3 Fencing	57
Annex B (normative) Requirements for interlocking devices Interlocking guards with and without guard locking.....	59

B.1	Interlocking guards without guard locking with one interlocking system and one position sensor	59
B.2	Interlocking guards with one interlocking system and two position sensors	59
B.3	Interlocking guards with one interlocking system and one position sensor with guard locking.....	59
Annex C	(normative) Requirements for trip devices	60
C.1	Mechanical trip device with one position sensor	60
C.2	Electro-sensitive protective devices (ESPD) with normal level	60
C.3	Electro-sensitive protective devices (ESPD) with high level	61
C.4	Electro-sensitive protective devices (high level) with control function.....	62
Annex D	(normative) Requirements for two-hand control devices	63
D.1	Two-hand control devices (normal level)	63
D.2	Two-hand control devices (high level)	63
Annex E	(normative) Requirements for hold-to-run control devices	65
E.1	Hold-to-run control devices (stop function)	65
E.2	Hold-to-run control devices (reverse function)	65
Annex F	(normative) Requirements for pressure sensitive mats and floors	67
Annex G	(normative) Requirements for safe tools	68
Annex H	(normative) Requirements for stop and release control devices	69
Annex I	(normative) Requirements for safety stroke devices	70
Annex J	(normative) Two-fault safety of machine control system	71
Annex K	(normative) Control measures for the suspension of safeguards	72
Annex L	(normative) Requirements for control guards (interlocking guards with start function).....	74
Annex M	(normative) Temperatures of burn threshold	75
Annex N	(normative) Important considerations and requirements for planning, design and construction of automatic manufacturing systems	76
N.1	Project organisation	76
N.2	Application of a safety strategy	76
N.3	Risk assessment	76
N.4	Requirements for documentation	76
N.5	Starting	76
N.6	Emergency stop	77
Annex ZA	(informative) Clauses of this European Standard addressing essential requirements or other provisions of EU Directives	78

Foreword

This document (EN 12203:2003) 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 February 2004, and conflicting national standards shall be withdrawn at the latest by February 2004.

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 Machinery Directive (98/37/EC) for shoe and leather presses.

For relationship with the Machinery Directive, see informative annex ZA, which is an integral part of this document.

Annexes A to N are 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

The extent to which hazards are covered is indicated in the scope of this Standard.

This Standard contains safety requirements for shoe and leather presses. It is prepared for the use of designers, manufacturers, suppliers and importers.

This document is a preview generated by EVS

1 Scope

1.1 This European Standard is applicable to shoe and leather presses (see 3.1) used in the manufacture of footwear, leather and imitation leather goods and other related components. These machines are:

- Sole attaching presses (open and closed types);
- Sole and insole moulding machines;
- Back part moulding machines;
- Backer, lining and toe puff attaching presses;
- Ironing presses;
- Marking, stamping, labelling and embossing machines;
- Stitch marking machines;
- Upper preforming machines;
- Automatic shoe and leather presses;
 - a) Premoulding machines for thermoplastic counters and counter forming machines;
 - b) Integrated manufacturing systems;
 - c) Presses with mobile stations and rotary configuration;
- Folding presses;
- Activating presses;
- Relasting and last slipping machines;
- Top piece attaching presses;
- Leather button covering machines.

1.2 This European Standard is not applicable to:

- Cutting and punching machines;
NOTE Prepared by CEN/TC 201/WG 1.
- Eyelet, hook and decorative nail attaching machines;
NOTE Prepared by CEN/TC 198/WG 1.
- Presses used for shoe repair and orthopaedic works
NOTE Prepared by CEN/TC 201/WG 6.

1.3 This European Standard 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, foreseeable misuse, component and system failure.

1.4 This European Standard covers significant hazards relevant to the footwear, leather and imitation leather goods manufacturing industries. (List of hazards see 4.)

This European Standard does not deal with precise technical measures for reducing the risks of fumes and dusts detrimental to health.

The use of machines within the scope of this European Standard in industries other than those specified in 1.1 can give rise to hazard not considered during its preparation.

1.5 This European Standard is also applicable to additional equipment for material handling and operation which are an integral part of the machine.

1.6 This European Standard assumes the machines

- are operated by adequately trained persons;
- are used with adequate workplace lighting conforming the local regulations or to EN 12464-1.

1.7 This standard applies to machines manufactured after its date of publication.

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, *Safety of machinery - Basic concepts, general principles for design – Part 2: Technical principles and specifications*

EN 294:1992, *Safety of machinery - Safety distance 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 547-1, *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, *Safety of machinery – Human body measurements – Part 2: Principles for determining the dimensions required for access openings*

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 614-1, *Safety of machinery – Ergonomic design principles – Part 1: Terminology and general principles*

EN 12203:2003 (E)

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*

EN 894-2, *Safety of machinery - Ergonomics requirements for the design of displays and control actuators - Part 2: Displays*

EN 894-3, *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*

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, *Safety of machinery – Safety requirements for fluid power systems and their components; Pneumatics*

EN 999, *Safety of machinery – The positioning of protective equipment in respect of approach speeds of parts of the human body*

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

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

EN 1037, *Safety of machinery – Prevention of unexpected start-up*

EN 1050, *Safety of machinery – Principles for risk assessment*

EN 1070:1998, *Safety of machinery – Terminology*

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 protective devices – Part 1: General principles for the design and testing of pressure sensitive mats and pressure sensitive floors*

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

EN ISO 11688-2, *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)*

EN 12464-1, *Light and lighting – Lightning of work places – Part 1: Indoor work places.*

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

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

EN 60947-5-1, *Low-voltage switchgear and controlgear – Part 5-1: Control circuit devices and switching elements – Electromechanical control circuit devices (IEC 60947-5-1:1997)*

EN 61496-1:1997, *Safety of machinery – Electrosensitive protective equipment – Part 1: General requirements and tests (IEC 61496-1:1997)*

prEN 61496-2:1997, *Safety of machinery – Electrosensitive protective equipment – Part 2: Particular requirements for equipment using active optoelectronic protective devices*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 292-1:1991 and in EN 1070:1998 shall apply. In addition, the following definitions apply.

3.1

shoe and leather press

machine with closing movements for attaching, moulding, ironing, marking, stamping, labelling, embossing, preforming, folding, activating, relasting, last slipping and button covering

3.2

sole attaching press (see Figure 1)

machine for attaching precemented soles to lasted uppers by pressure

3.3

sole and insole moulding machine (see Figure 2)

machine used to preform soles and insoles to the shape of last bottom by means of moulds and pressure

3.4

back part moulding machine (see Figure 3)

machine used for laminating upper counter and lining and preforming to the heel part shape of last by pressure and heat

3.5

backer, lining and toe puff attaching press (see e.g. Figure 4)

machine used for laminating backer, lining and toe puffs to the upper by pressure and heat

3.6

ironing press (see e. g. Figure 5)

machine used for attaching, smoothing, flattening and shaping the upper by pressure and heat

3.7

marking, stamping, labelling and embossing machine (see e.g. Figures 6 and 7)

machine used for marking, designation and decoration of shoes, leather goods and related components by pressure and heat including sling-form presses

3.8

stitch marking machine (see Figure 8)

machine used to mark the location of stitch seams and components on relevant workpieces by pressure and heat

3.9

upper preforming machine (see Figure 9)

machine used to preshape uppers to style related requirements by pressure and heat

3.10

premoulding machine for thermoplastic counter (see Figure 10)

machine used to shape thermo-plastic counter blanks to the last form by pressure and heat or by pressure heat and cooking

3.11

counter forming machine (automatic version see Figure 11)

machine used to shape blanks made from fibre materials to the last form, by pressure