

**Jalatsivalmistusseadmed.
Jalatsivormimismasinad.
Ohutusnõuded**

Footwear manufacturing machines - Footwear
moulding machines - Safety requirements

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1845:1999 sisaldab Euroopa standardi EN 1845:1998 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 23.11.1999 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1845:1999 consists of the English text of the European standard EN 1845:1998.</p> <p>This document is endorsed on 23.11.1999 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>Käsitlusala: Standard kehtib jalatsivormimismasinade kohta, mis on ette nähtud kasutamiseks jalatsitööstuses jalatsite ja nende osade tootmiseks.</p>	<p>Scope:</p>
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ICS 61.060

Võtmesõnad: ergonoomiline masinaehitus, jalatsid, kontroll, nahatöötlusseadmed, ohtlikud alad, ohud, ohutusmeetmed, ohutusseadised, seadmed, seadmeohutus, tootmine, vormimine, õnnetuste vältimine, ärakasutamine

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Descriptors: leather-working machines, manufacturing, shoes, moulding, equipment, safety of machine, accident prevention, hazards, dangerous areas, safety measures, human factor engineering, safety devices, inspection, utilization, information, marking

English version

Footwear manufacturing machines - Footwear moulding machines - Safety requirements

Machines pour la fabrication des chaussures - Machines de moulage pour chaussures - Prescriptions de sécurité

Maschinen zur Herstellung von Schuhwerk - Schuhformmaschinen - Sicherheitsanforderungen

This European Standard was approved by CEN on 26 June 1998.

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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.

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



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FOREWORD

This European Standard 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 January 1999, and conflicting national standards shall be withdrawn at the latest by January 1999.

This European Standard 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 standard.

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, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

0 INTRODUCTION

The extent to which hazards are covered is indicated in the scope of this Standard. In addition, machinery should comply as appropriate with EN 292 for hazards which are not covered by this Standard.

This Standard contains safety requirements for footwear moulding machines. It is aimed at designers, manufacturers, suppliers and importers.

1 SCOPE

1.1 This Standard applies to footwear moulding machines which are intended for use in the shoe industry for the production of footwear and footwear components.

These machines are:

- direct-on sole moulding machines
- full shoe and boot moulding machines
- unit sole and footwear component moulding machines.

1.2 This 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.

1.3 The following machines are excluded from the scope of this Standard unless used for direct-on sole moulding or reaction moulding:

- moulding machines with static injection units and static mould stations (clamping units),
- moulding machines with static metering and mixing units and mobile stations with linear configuration (mould carriers).

1.4 This Standard covers all hazards relevant to the footwear manufacturing industry only. (List of hazards see clause 4).

The standard does not deal with

- precise technical measures for reducing the risks from fumes,
- hazards created by the mixing and metering unit.

Note: For metering and mixing units, see EN 1612-1.

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

Note: For this application see EN 201 and prEN 1612-2.

1.5 This Standard also applies to additional equipment for material handling and operation which are an integral part of the machine such as:

spraying devices, injection units, casting units, nozzle cleaners, sprue pullers, mould front edge cleaners, activating devices and robots for preparatory and subsequent treatment.
The standard does not deal with precise technical measures for reducing the risks from fumes.

1.6 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.

EN 201:1997	Rubber and plastics machines - Injection moulding machines - Safety requirements
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 418:1992:	Safety of machinery - Emergency stop equipment, functional aspects; principles for design
EN 457:1992:	Safety of machinery - Auditory danger signals; general requirements, design and testing (ISO 7731:1986 modified)
EN 547-1:1996:	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:	Safety of machinery - Human body dimensions; 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 614-1:1995:	Safety of machinery - Ergonomic design principles - Part 1: Terminology and general principles
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 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 775:1992: + AC:1993	Manipulating industrial robots - safety (ISO 10218:1992, modified)
EN 811:1996:	Safety of machinery - Safety distances to prevent danger zones being reached by the lower limbs
EN 842:1996:	Safety of machinery - Visual danger signals; general requirements; design and testing
EN 894-1:1997:	Safety of machinery - Ergonomics requirements for the design of displays and control actuators - Part 1: General principles for human interactions with displays and control actuators

EN 894-2:1997:	Safety of machinery - Ergonomics requirements for the design of displays and control actuators - Part 2: Displays
prEN 894-3:1992:	Safety of machinery - Ergonomics requirements for the design of displays and control actuators; Part 3: Control actuators
EN 953:1997:	Safety of machinery - 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 981:1996:	Safety of machinery - System of auditory and visual danger and visual danger and information signals
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
prEN 999:1993:	Safety of machinery - The positioning of protective equipment in respect of approach speeds of parts of the human body
prEN 1005-2:1993:	Safety of machinery - Human physical performance - Part 2: Manual handling of objects associated to machinery
prEN 1005-3:1993:	Safety of machinery - Human physical performance - Part 3: Recommended force limits for machinery operation
EN 1037:1995:	Safety of machinery - Prevention of unexpected start-up
EN 1050:1996:	Safety of machinery - Principles for risk assessment
ENV 1070	Safety of machinery - Terminology
EN 1088:1995:	Safety of machinery - Interlocking devices with and without guard locking; general principles and provisions for design
prEN 1093-1:1993:	Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 1: Selection of test methods
EN 1612-1:1997	Rubber and plastics machines; safety - Reaction moulding machines - requirements for the design and construction - Part 1: Metering and mixing unit
prEN 1612-2:1995	Rubber and plastics machines; Safety - Reaction moulding machines - requirements for design and construction - Part 2: Reaction moulding plant

prEN 1760-1:1994:	Safety of machinery - Pressure sensitive protective devices - Part 1: General principles for the design and testing of pressure sensing mats and pressure sensing floors
prEN 1921:1995:	Industrial automation systems - Safety of integrated manufacturing systems - Basic requirements
prEN ISO 3740 ¹⁾	Acoustics - Determination of sound power levels of noise sources. Guidelines for the use of basic standards and for preparation of noise test codes
EN ISO 4871:1996	Acoustics - Declaration and verification of noise emission values of machinery and equipment
prEN ISO 9614-1 ¹⁾	Acoustics - Determination of sound power level of noise sources using sound intensity - Part 1: Measurement at discrete points
EN ISO 11200	Acoustics-Noise emitted by machinery and equipment. Guidelines for the use of basic standards for the determination of the emission sound pressure levels at work station and at other specified positions
ISO TR 11688-1	Acoustics-Recommended practice for the design of low-noise machinery and equipment - Part 1: Planning
ISO CD 11688-2 ¹⁾	Acoustics-Recommended practice for the design of low-noise machinery and equipment - Part 2: Noise generation principles
EN ISO 11689:1996:	Acoustics - Procedure for the comparison of noise-emission data for machinery and equipment
prEN 50100-1:1994:	Safety of machinery - Electrosensitive protective equipment - Part 1: General requirements and tests
prEN 50100-2:1994:	Safety of machinery - Electrosensitive protective equipment - Part 2: Particular requirements for systems using active opto-electronic protective devices
EN 60204-1:1992:	Safety of machinery - Electrical equipment of machines. Part 1: General requirements
EN 60947-5-1:1992:	Control circuit devices and switching elements; electro-mechanical control circuit devices

¹⁾ These standards are under preparation in ISO (revision of ISO 3740, publication of ISO 11688-2 pending).