



SLOVENSKI STANDARD

SIST EN 12653:2000

01-april-2000

Footwear, leather and imitation leather manufacturing machines - Nailing machines - Safety requirements

Footwear, leather and imitation leather manufacturing machines - Nailing machines - Safety requirements

Maschinen für die Herstellung von Schuhen aus Leder und Kunstleder - Nagelmaschinen - Sicherheitsanforderungen (standards.iteh.ai)

Machines pour la fabrication des chaussures et articles en cuir et en matériaux similaires - Machines à clouer - Exigences de sécurité

Ta slovenski standard je istoveten z: EN 12653:1999

ICS:

61.060 Obuvala Footwear

SIST EN 12653:2000 en

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ICS 61.060

English version

Footwear, leather and imitation leather manufacturing machines
- Nailing machines - Safety requirementsMachines pour la fabrication des chaussures et articles en
cuir et en matériaux similaires - Machines à clouer -
Exigences de sécuritéMaschinen für die Herstellung von Schuhen aus Leder und
Kunstleder - Nagelmaschinen - Sicherheitsanforderungen

This European Standard was approved by CEN on 4 September 1999.

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 Central Secretariat 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 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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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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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 April 2000, and conflicting national standards shall be withdrawn at the latest by April 2000.

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.

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Introduction

This European standard is a type C standard as stated in accordance with EN 1070.

The machinery concerned and the extent to which hazards are covered are indicated in clause 1.

1 Scope

This standard is applicable to nailing machines used in the footwear manufacturing industry, namely:

- heel attaching machines (see figure 1)
- heel nailing machines (see figure 2)
- gang nailing machines (see figure 3)

This standard does not apply to gang nailing machines which comply in all respects with the requirements for seat lasting machines: see EN 931.

This standard specifies safety requirements for the design and construction of nailing machines. No specific requirements are included for transport, commissioning and decommissioning.

It takes account of intended use, foreseeable misuse, component and system failure.

This standard covers all hazards relevant to the footwear manufacturing industry. Use of the machines within the scope of this standard in different industries may give rise to hazards which were not taken into account at the time of its preparation.

This standard applies to machines manufactured after its date of issue.

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 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 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 894-1	Safety of machinery - Ergonomic requirements for the design of displays and control actuators - Part 1: General principles for human interaction with displays and control actuators.
EN 894-2	Safety of machinery - Ergonomic requirements for the design of displays and control actuators - Part 2: Displays.
prEN 894-3	Safety of machinery - Ergonomic requirements for the design of displays and control actuators - Part 3: Control actuators
EN 931	Footwear manufacturing machines – Lasting machines – Safety requirements.
EN 953:1997	Safety of machinery - Guards - General requirements for the design and the construction of fixed and movable guards.
EN 954-1	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 components - Hydraulics. <small>SIST EN 12653:2000 https://standards.iteh.ai/catalog/standards/sist/d559535c-7d2f-4167-905e-0ed60dd8e42/sist-en-12653-2000</small>
EN 983:1996	Safety of machinery - Safety requirements for fluid power systems and components - Pneumatics.
EN 999 : 1998	Safety of machinery - The positioning of protective equipment in respect of approach speed of the parts of the human body
prEN 1005-2	Safety of machinery - Human physical performance - Part 2: Manual handling of objects associated with machinery.

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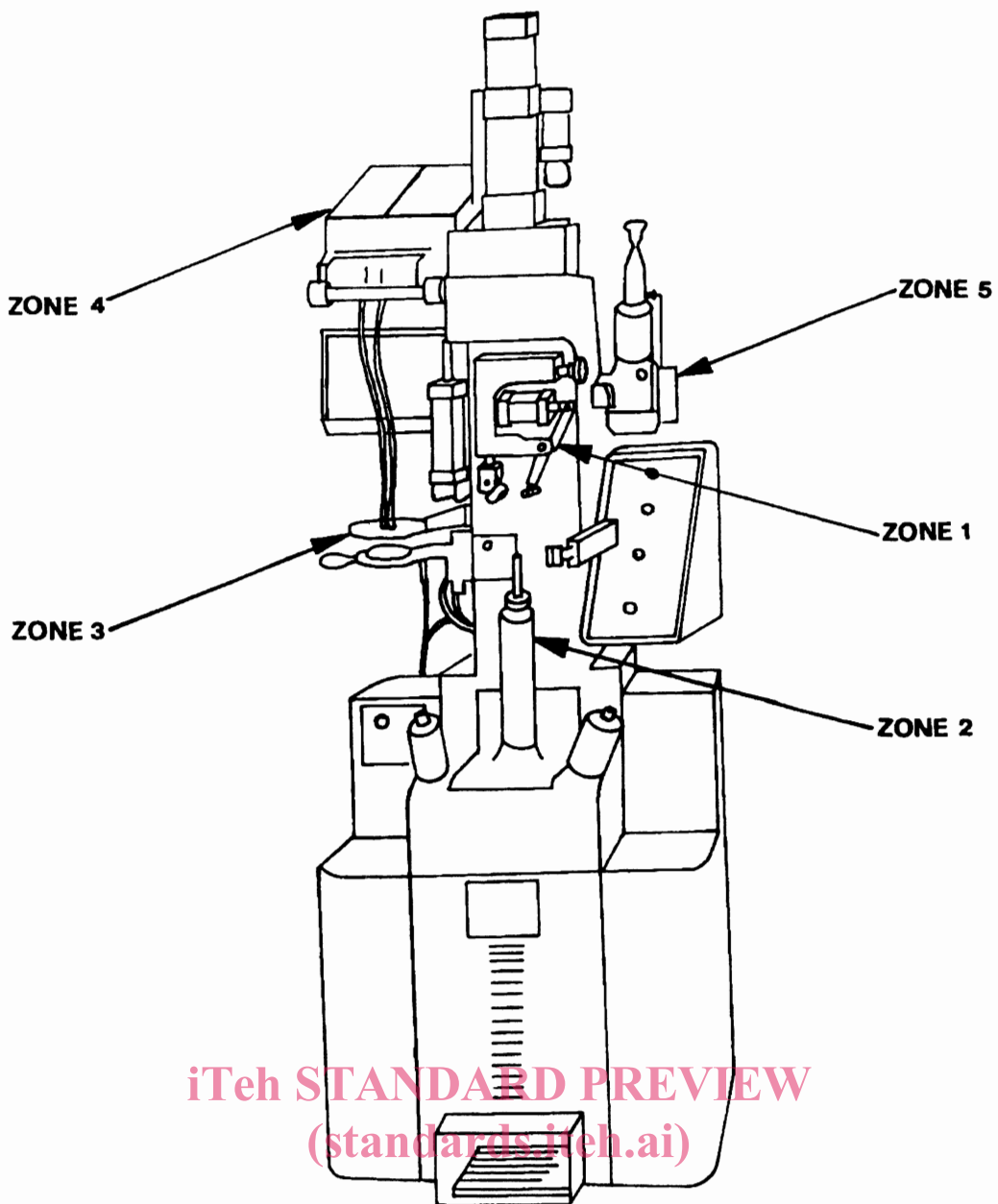
- prEN 1005-3 Safety of machinery - Human physical performance - Part 3: Recommended force limits for machinery operation.
- EN 1037:1995 Safety of machinery - Prevention of unexpected start-up.
- EN 1070 Safety of machinery - Terminology.
- EN 1088 : 1995 Safety of machinery - Interlocking devices associated with guards - Principles for design and selection
- prEN 1760-2: 1996 Safety of machinery - Pressure sensitive protective devices - Part 2: general principles for the design and testing of pressure sensitive edges and pressure sensitive bars
- prEN ISO 3740 Acoustics - Determination of sound power levels of noise sources - Guidelines for the use of basic standards (ISO/DIS 3740:1998).
- EN ISO 4871 Acoustics - Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996).
- EN ISO 9614 Acoustics - Determination of sound power level of noise sources using sound intensity.
- EN ISO 11200 Acoustics - Noise emitted by machinery and equipment - Guidelines for the use of basic standards for the determination of emission sound pressure levels at a work station and other specified positions (ISO 11200:1995).
- EN ISO 11688-1 Acoustics - Recommended practice for the design of low-noise machinery and equipment - Part 1: Planning (ISO TR 11688-1:1998)
- EN ISO 11689 Acoustics – Procedure for the comparison of noise-emission data for machinery and equipment (ISO 11689:1996).
- prEN 12545 Footwear, leather and imitation leather goods manufacturing machines - Noise test code - Common requirements
- EN 60204-1:1992 Safety of machinery - Electrical equipment of machines; Part 1: General requirements (IEC 204-1:1992).
- EN 60227-1 Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 1: General requirements
- EN 60245-1 Rubber insulated cables of rated voltages up to and including 450/750 V - Part 1: General requirements

- EN 60947-4-1 Low-voltage switchgear and control gear - Part 4 Contactors and motor-starters - Section 1 - Electromechanical contactors and motor-starters (IEC 947-4-1:1990).
- EN 60947-5-1 Low-voltage switchgear and control gear - Part 5-1: Control circuit devices and switching elements - Electro-mechanical control circuit devices (IEC 947-5-1:1997).

3 Definitions

For the purposes of this European standard the definitions given in EN 1070 as well as the following definitions are applicable.

- 3.1 heel attaching machine** (see figure 1): Machine which attaches the heel to the shoe by means of a screw while it is still on the last. The heel can be positioned on the shoe in advance by the use of an adhesive.
- 3.2 heel nailing machine** (see figure 2): Machine which nails the heel onto the unlasted shoe (shoe with no last) by means of nails and screw.
- 3.3 gang nailing machine** (see figure 3): Machine which nails the sole onto the shoe in the heel area using nails while it is still on the last.
- 3.4 hold down** (see zone 1 in figures 1, 2 and 3): Clamping device to hold the heel during positioning on the unit sole and nailing process.
- 3.5 nailing jack** (see zone 2 in figures 1, 2 and 3): Device into which nails are fed before being nailed into the sole/heel by the drivers.
- 3.6 loader arm** (see zone 3 in figures 1, 2 and 3): Device which carries the nails into the nailing jack.
- 3.7 loader** (see zone 4 in figures 1, 2 and 3): A box which supplies nails to the loader arm.
- 3.8 thermocement melting chamber** (see zone 5 in figures 1 and 2): Enclosure where thermocement is melted prior to application.
- 3.9 automatic cycle for unit sole:** A cycle which includes clamping, nailing, clamping release and loading of nails and which can be initiated by a single control signal.



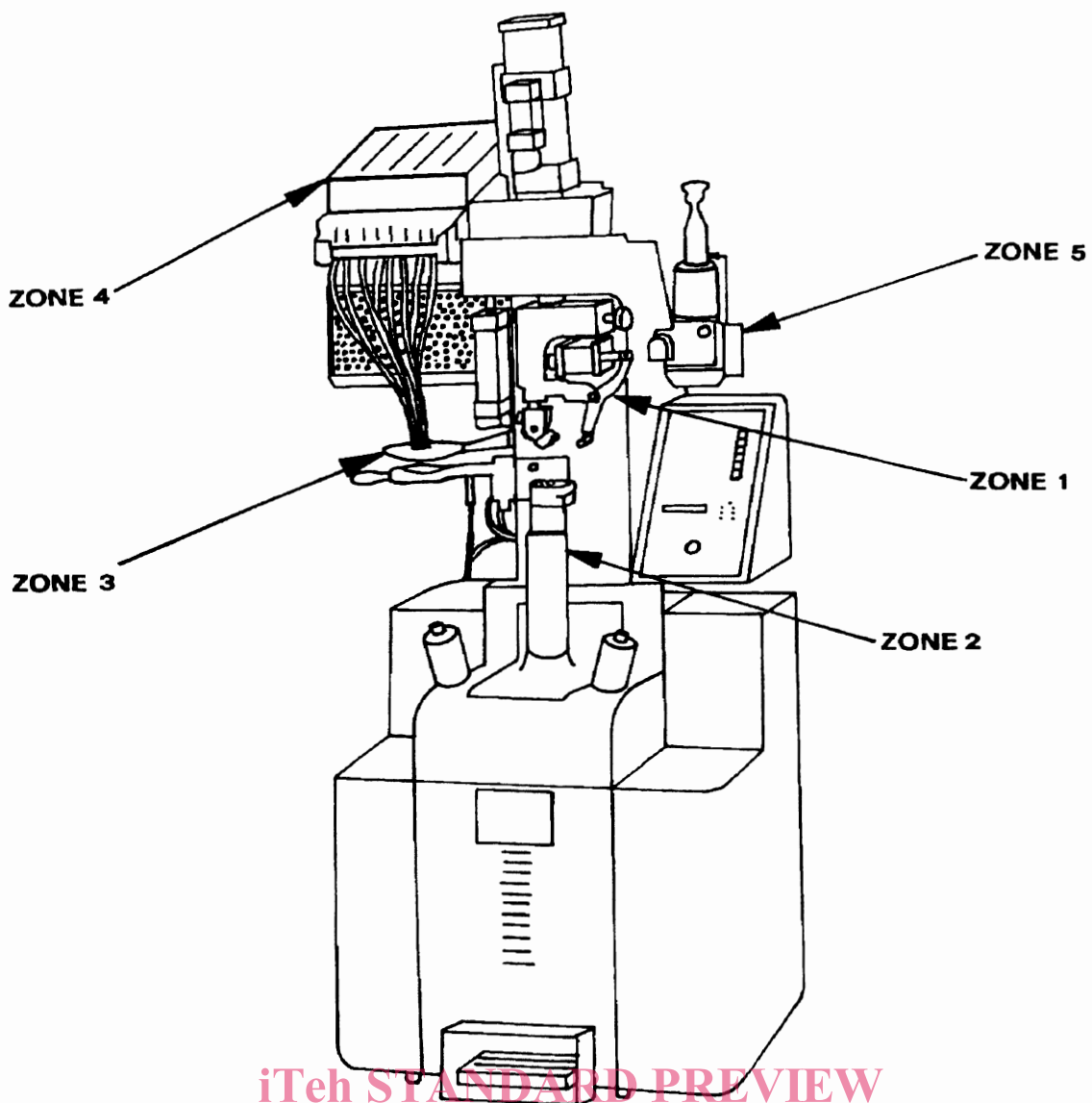
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- Zone 1: hold down
- Zone 2: nailing jack
- Zone 3: loader arm
- Zone 4: loader
- Zone 5: thermocement melting chamber

Figure 1: Heel attaching machine



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- Zone 1: hold down
- Zone 2: nailing jack
- Zone 3: loader arm
- Zone 4: loader
- Zone 5: thermocement melting chamber

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Figure 2: Heel nailing machine