

**Puidutöötlemismasinate ohutus. Tappimismasinad.
Osa 1: Ühisendilised liuglauaga tappimismasinad
KONSOLIDEERITUD TEKST**

Safety of woodworking machines - Tenoning machines -
Part 1: Single end tenoning machines with sliding table
CONSOLIDATED TEXT

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1218-1:2000+A1:2009 sisaldab Euroopa standardi EN 1218-1:1999+A1:2009 ingliskeelset teksti.

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English Version

**Safety of woodworking machines - Tenoning machines - Part 1:
Single end tenoning machines with sliding table**

Sécurité des machines pour le travail du bois -
Tenonneuses - Partie 1: Tenonneuses simples alimentées
par table à rouleaux

Sicherheit von Holzbearbeitungsmaschinen -
Zapfenschneid- und Schlitzmaschinen - Teil 1: Einseitige
Zapfenschneid- und Schlitzmaschinen mit Schiebetisch

This European Standard was approved by CEN on 8 July 1999 and includes Amendment 1 approved by CEN on 23 July 2009.

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Foreword

This document (EN 1218-1:1999+A1:2009) has been prepared by Technical Committee CEN/TC 142 "Woodworking machines - 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of an identical text or by endorsement, at the latest by February 2010, and conflicting national standards shall be withdrawn at the latest by February 2010.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 2009-07-23.

This document supersedes EN 1218-1:1999.

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

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 **A1** Machinery Directive **A1**.

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

Organisations contributing to the preparation of this European standard include the European Committee of Woodworking Machinery Manufacturers Association "EUMABOIS".

Normative and informative annexes to this standard are listed in the Contents list.

The European Standards produced by CEN/TC 142 are particular to woodworking machines and complement the relevant A and B standards on the subject of general safety (see introduction of **A1** EN ISO 12100-1:2003 **A1** for a description of A, B and C standards).

A1 EN 1218 *Safety of woodworking machines — Tenoning machines* consists of the following parts:

Part 1: Single end tenoning machines with sliding table

Part 2: Double end tenoning and/or profiling machines fed by chain or chains

Part 3: Hand fed tenoning machines with sliding table for cutting structural timbers

Part 4: Edge banding machines fed by chain(s)

*Part 5: One side profiling machines with fixed table and feed rollers or feed chain **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, 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

This European standard has been prepared to be a harmonised standard to provide one means of conforming to the essential safety requirements of the Machinery Directive, and associated EFTA regulations. This European Standard is a type "C" standard as defined in **EN ISO 12100-1:2003**.

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

The requirements of this standard concern designers, manufacturers, suppliers and importers of single end tenoning machines with sliding table.

This European Standard also includes information to be provided by the manufacturer to the user.

Common requirements for tooling are given in **EN 847-1:2005**.

1 Scope

This document specifies all significant hazards, hazardous situations and events as listed in Clause 4 which are relevant to single end tenoning machines with sliding table, hereinafter referred to as "machines", designed to cut solid wood, chipboard, fibreboard, plywood and also these materials where they are covered with plastic laminate or edgings.

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This standard does not apply to:

- a) machines where the tenon is produced only by means of saw blades;
- b) machines where the design speed of any tool spindle exceeds 6000 min^{-1} ;
- c) machines where the average sliding table feed speed in either direction exceeds $25 \text{ m min}^{-1} + 5\%$;
- d) combined machines used for tenoning (see **EN 940:2009**);
- e) tenoning attachments on a vertical spindle moulding machine (see **EN 848-1:2007**).

NOTE Single and double end tenoning machines fed by chain or chains are dealt with in **EN 1218-2**. Single end tenoning machines where the tenon is produced only by means of saw blades are dealt with in **EN 1218-3**.

This European Standard is primarily applicable to machines which are manufactured after the date of issue of this standard.

2 Normative references

A1 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**

A1 *deleted text* **A1**

EN 349:1993, *Safety of machinery — Minimum distances to avoid crushing of parts of the human body*

A1 *deleted text* **A1**

A1 EN 614-1:2006, *Safety of machinery — Ergonomic design principles — Part 1: Terminology and general principles* **A1**

A1 EN 847-1:2005 **A1**, *Tools for woodworking — Safety requirements — Part 1: Milling tools and circular sawblades*

A1 EN 848-1:2007 **A1**, *Safety of woodworking machines — One side moulding machines with rotating tool — Part 1: Single spindle vertical moulding machines*

A1 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*

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

A1 EN 940:2009 **A1**, *Safety of woodworking machines — Combined wood-working machines*

EN 953:1997, **A1** *Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards* **A1**

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

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

A1 EN 1005-1:2001, *Safety of machinery — Human physical performance — Part 1: Terms and definitions*

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 1005-4:2005, *Safety of machinery — Human physical performance — Part 4: Evaluation of working postures and movements in relation to machinery*

EN 1037:1995, *Safety of machinery — Prevention of unexpected start-up* **A1**

EN 1088:1995, *Safety of machinery — Interlocking devices with and without guard locking — General principles and specifications for design*

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

EN 60529:1991, *Degrees of protection provided by enclosures (IP Code) (IEC 529:1989)*

EN 60947-4-1:2001 ^{A1}, *Low voltage switchgear and control gear — Part 4: Contactors and motor starters — Section 1: Electromechanical contactors and motor starters* ^{A1} (IEC 60947-4-1:2000) ^{A1}

EN 60947-5-1:2004 ^{A1}, *Low voltage switchgear and control gear — Part 5: Control circuit devices and switching elements — Section 1: Electromechanical control circuit devices* ^{A1} (IEC 60947-5-1:2003) ^{A1}

EN 61310-1:2008, *Safety of machinery — Indication, marking and actuation — Part 1: Requirements for visual, auditory and tactile signals (IEC 61310-1:2007)* ^{A1}

EN ISO 3743-1:1995, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Engineering methods for small, moveable sources in reverberant fields — Part 1: Comparison method for hard walled test rooms (ISO 3743-1:1994)*

EN ISO 3743-2:1996, *Acoustics — Determination of sound power levels of noise sources — Engineering methods for small, moveable sources in reverberant fields — Part 2: Method for special reverberation test rooms (ISO 3743-2:1994)*

EN ISO 3744:1995, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Engineering method in an essentially free field over a reflecting plane (ISO 3744:1994)*

EN ISO 3745:2003, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Precision methods for anechoic and semi-anechoic rooms (ISO 3745:2003)* ^{A1}

EN ISO 3746:1995, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane (ISO 3746:1995)*

EN ISO 4871:1997, *Acoustics — Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996)*

EN ISO 9614-1:1995, *Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 1: Measurement at discreet points (ISO 9614-1:1993)*

EN ISO 11202:1995, *Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at a work station and at other specified positions — Survey method (in situ) (ISO 11202:1995)*

EN ISO 11204:1995, *Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at the workstation and at other specified positions — Method requiring environmental corrections (ISO 11204:1995)*

EN ISO 11688-1:1998, *Acoustics — Recommended practice for the design of low-noise machinery and equipment — Part 1: Planning (ISO/TR 11688-1:1995)* ^{A1}

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 13850:2006, *Safety of machinery — Emergency stop — Principles for design (ISO 13850:2006)* ^{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}

ISO 230:1996, *Test code for machine tools*

☐_{A1} deleted text ☐_{A1}

ISO 7960:1995, *Airborne noise emitted by machine tools — Operating conditions for woodworking machines*

ISO 7988:1988, *Woodworking machines — Double-end tenoning machines — Nomenclature and acceptance conditions*

☐_{A1} deleted text ☐_{A1}

☐_{A1} HD 21.1 S4:2002, *Cables of rated voltages up to and including 450/750 V and having thermoplastic insulation — Part 1: General requirements* ☐_{A1}

☐_{A1} HD 22.1 S4:2002, *Cables of rated voltages up to and including 450/750 V and having cross-linked insulation — Part 1: General requirements* ☐_{A1}

3 Definitions

For the purposes of this European Standard the following definitions apply:

3.1

single end tenoning machine with sliding table

a machine designed for the production of a tenon on one end of a workpiece during one cycle. The tenon is cut by means of milling tools and saw blade(s) mounted on one or more spindles

3.2

tenon

the machined projections and slots on the end of a workpiece to facilitate the joining of workpieces. This includes profiled tenons

3.3

hand feed

the manual holding and/or guiding of the workpiece or of a machine element incorporating a tool. Hand feed includes the use of a hand operated carriage on which the workpiece is placed manually or clamped and the use of a demountable power feed unit

3.4

integrated feed

a feed mechanism for the workpiece or tool which is integrated with the machine and where the workpiece or machine element with incorporated tool are held and controlled mechanically during the machining operation

3.5

ejection

the unexpected movement of the workpiece, parts of it or part of the machine from the machine during processing

3.6

run-up time

the elapsed time from the actuation of the start control device until the spindle reaches the intended speed

3.7

☐_{A1} information from the supplier ☐_{A1}

statements, sales literature, leaflets or other documents, where a manufacturer (or supplier) declares either the characteristics or the compliance of the material or product to a relevant standard

3.8

machine actuator

a power mechanism used to effect the motion of the machine