Puidutöötlemismasinate ohutus. Lintsaagimismasinad KONSOLIDEERITUD TEKST

Safety of woodworking machines - Band sawing machines CONSOLIDATED TEXT

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1807:2000+A1:2009 sisaldab Euroopa standardi EN 1807:1999+A1:2009 ingliskeelset teksti.	This Estonian standard EVS-EN 1807:2000+A1:2009 consists of the English text of the European standard EN 1807:1999+A1:2009.
Standard on kinnitatud Eesti Standardikeskuse 30.10.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 30.10.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 02.09.2009.	Date of Availability of the European standard text 02.09.2009.
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English Version

Safety of woodworking machines - Band sawing machines

Sécurité des machines pour le travail du bois - Machines à scier à ruban

Sicherheit von Holzbearbeitungsmaschinen - Bandsägemaschinen

This European Standard was approved by CEN on 6 May 1999 and includes Amendment 1 approved by CEN on 30 July 2009.

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Foreword

This document (EN 1807:1999+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of an identical text or by endorsement, at the latest by March 2010, and conflicting national standards shall be withdrawn at the latest by March 2010.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 2009-07-30.

This document supersedes EN 1807:1999.

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 Directives ⟨A1⟧.

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

⟦A1⟩ This European Standard also supports essential requirements of the Outdoor Noise Directive 2000/14/EC. ⟨A1⟧

Organisations contributing to the preparation of this European Standard include:

The European Manufacturers Association "EUMABOIS".

Normative and informative annexes to this European 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).

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 Health and Safety Requirements of the Machinery Directive and associated EFTA Regulations. This European Standard is a type "C" standard as defined in [A1] EN ISO 12100-1:2003 [A1].

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

The requirements of this standard concern designers, manufacturers, suppliers and importers of band sawing machines, re-sawing machines and log sawing machines.

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

1 Scope

[A1] This document specifies all significant hazards, hazardous situations and events as listed in Clause 4 which are relevant to stationary and displaceable band sawing machines with either manual or automatic loading and/or unloading, 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. [A1]

[A1] *deleted text* [A1]

[A1] *deleted text* [A1] This European Standard does not cover the hazards related to Electromagnetic Compatibility (EMC) as required by the EMC Directive 89/336/EEC of 03-05-89.

This European Standard does not apply to:

— [A1] hand held motor-operated electric tools or any adaptation permitting their use in a different mode, i.e. bench mounting; [A1]

  [A1] NOTE 1 Hand-held motor operated electric tools are covered by the requirements of EN 60745-1:2006 together with EN 60745-2-20:2003. [A1]

— [A1] transportable machines set up on a bench or a table similar to a bench, which are intended to carry out work in a stationary position, capable of being lifted by one person by hand. [A1]

  [A1] NOTE 2 Transportable electrically driven machines are covered by the requirements of EN 61029-1:2000 together with EN 61029-2-5:2002. [A1]

This European Standard does not cover the hazards arising from machining processes (e.g. milling and sawing) of related to associated machines e.g. canters and circular saws.

This European Standard is primarily directed at 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]

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

[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]

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*

[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 associated with guards - Principles for design and selection*

[A1] 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* [A1]

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

EN 60529:1991, *Specification for degree of protection provided by enclosure (IP code) (IEC 60529:1989)*

[A1] EN 60825-1:2007 [A1], *Safety of laser products — Equipment classification requirements and user's guide* [A1] *(IEC 60825:2007)* [A1]

[A1] EN 60947-4-1:2001 [A1], *Specification for low voltage switchgear and control gear — Part 4: Contractors and motor starters — Section 1: Electromechanical contractors and motor starters* [A1] *(IEC 60947-4-1:2000)* [A1]

[A1] EN 60947-5-1:2004 [A1], *Specification for low voltage switchgear and control gear — Part 5: Control circuits, devices and switching elements — Section 1: Electromechanical control circuit devices* [A1] *(IEC 60947-5-1:2003)* [A1]

[A1] EN 61029:2000 [A1], *Safety of transportable motor operated electric tools — Part 1: General requirements* [A1] *(IEC 61029-1:1990, modified)* [A1]

[A1] EN 61029-2-5:2002, *Safety of transportable motor-operated electric tools — Part 2: Particular requirements for band saws (IEC 61029-2-5:1993+A1:2001, modified)* [A1]

[A1] CLC/TS 61496-2:2006 [A1], *Safety of machinery — Electro-sensitive protective equipment —* [A1] *Part 2: Particular requirements for equipment using active opto-electronic protective devices (AOPDs) (IEC 61496-2:2006)* [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 using sound pressure — Engineering methods for small, moveable sources in reverberant fields — Part 2: Methods for special reverberant test rooms (ISO 3743-2:1996)*

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 3744:1995)*

[A1] 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 9614-1:1995, *Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 1: Measurement at discrete points (ISO 9614-1:1993)*

[A1] EN ISO 4871:1996, *Acoustics — Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996)* [A1]

EN ISO 11202:1995, *Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at the workstation 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)*

[A1] 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]

[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⟩

⟨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⟩ ISO 1940-1:2003, *Mechanical vibration — Balance quality requirements for rotors in a constant (rigid) state — Part 1: Specification and verification of balance tolerances* ⟨A1⟩

⟨A1⟩ *deleted text* ⟨A1⟩

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

⟨A1⟩ *deleted text* ⟨A1⟩

3 Terms and definitions

3.1 Definitions

For the purposes of this standard the following definitions apply:

3.1.1
band sawing machine
a sawing machine with one or more saw blades in the form of continuous bands each mounted on and running between two or more band wheels

3.1.2
saw blade straining
the force exerted on the saw blade to keep it in position on the band wheels during cutting (see figure 15)

3.1.3
tensioning
the process used to form the cross-section of the saw blade, either by rolling or hammering, in order to ensure that the front and back edges of the saw blade grip the band wheels

3.1.4
Saw blade tracking
the means used to maintain the position of the saw blade on the band wheels (see figure 16)

3.1.5
dogging
the means of securing a log for cutting

3.1.6
table band saw
a hand fed band sawing machine with a fixed or tilting table (bed) or tilting frame (see figures 1, 7 and 8)

3.1.7
log band saw
a band sawing machine designed for the primary conversion of logs

3.1.7.1
travelling table log saw
a hand fed or power fed log band saw fitted with a travelling table and dogging (see figure 3)