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Safety of woodworking machines - Circular sawing machines - Part 8: Single blade edging circular rip sawing machines with power driven saw unit and manual loading and/or unloading CONSOLIDATED TEXT



EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1870-8:2001+A1:2009 sisaldab Euroopa standardi EN 1870-8:2001+A1:2009 ingliskeelset teksti.

This Estonian standard EVS-EN 1870-8:2001+A1:2009 consists of the English text of the European standard EN 1870-8:2001+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 09.09.2009.

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The standard is available from Estonian standardisation organisation.

ICS 79.120.10

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English Version

Safety of woodworking machines - Circular sawing machines - Part 8: Single blade edging circular rip sawing machines with power driven saw unit and manual loading and/or unloading

Sécurité des machines pour le travail du bois - Machines à scier circulaires - Partie 8: Déligneuses monolames à déplacement mécanisé du groupe de sciage et à chargement manuel et/ou déchargement manuel

Sicherheit von Holzbearbeitungsmaschinen -Kreissägemaschinen - Teil 8: Einblattbesäum- und Leistenkreissägemaschinen mit kraftbetätigtem Sägeaggregat und Handbeschickung und/oder Handentnahme

This European Standard was approved by CEN on 30 September 2001 and includes Amendment 1 approved by CEN on 30 July 2009.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 1870-8:2001+A1:2009) has been prepared by 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 1870-8:2001.

The start and finish of text introduced or altered by amendment is indicated in the text by tags [A].

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 the Machinery Directive.

For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. (A)

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

The annexes A, B, C, D and E are normative and Annexes ZA and ZB (4) are informative.

This standard includes a Bibliography.

- A EN 1870 Safety of woodworking machines Circular sawing machines consists of the following parts:
- Part 1: Circular saw benches (with and without sliding table), dimension saws and building site saws
- Part 3: Down cutting cross-cut saws and dual purpose down cutting cross-cut saws/circular saw benches
- Part 4: Multi-blade rip sawing machines with manual loading and/or unloading
- Part 5: Circular saw -benches/up-cutting cross-cut sawing machines
- Part 6: Circular sawing machines for firewood and dual purpose circular sawing machines for firewood/circular saw benches, with manual loading and/or unloading
- Part 7: Single blade log sawing machines with integrated feed table and manual loading and/or unloading
- Part 8: Single blade edging circular rip sawing machines with power driven saw unit and manual loading and/or unloading
- Part 9: Double blade circular sawing machines for cross-cutting with integrated feed and with manual loading and/or unloading
- Part 10: Single blade automatic and semi-automatic up-cutting cross-cut sawing machines

- Part 11: Semi-automatic and automatic horizontal cross-cut sawing machines with one saw unit (radial arm saws)
- Part 12: Pendulum cross-cut sawing machines
- Part 13: Horizontal beam panel sawing machines
- Part 14: Vertical panel sawing machines
- Part 15: Multi-blade cross-cut sawing machines with integrated feed of the workpiece and manual loading and/or unloading
- Part 16: Double mitre sawing machines for V-cutting
- Part 17: Manual horizontal cutting cross-cut sawing machines with one saw unit (manual radial arm saws) [A]

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 EN ISO 12100-1:2003 (A) 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, A Norw Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

0 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 (41).

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

The requirements of this European Standard concern designers, manufacturers, suppliers and importers of single blade edging circular rip sawing machines with power driven saw unit and manual loading and/or unloading.

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

Common requirements for tooling are given in A EN 847-1:2005 4.

1 Scope

This document deals with all significant hazards, hazardous situations and events as listed in Clause 4 which are relevant to single blade edging circular rip sawing machines with power driven saw unit and manual loading and/or unloading, hereinafter referred to as "machines", designed to cut solid wood, chipboard, fibreboard and plywood. (A)

A₁ deleted text (A₁

For Computer Numerically Controlled (CNC) machines this European Standard does not cover hazards related to Electro-Magnetic Compatibility (EMC).

This European Standard applies to machines where the workpiece is stationary, the vertical and horizontal movements of the saw unit are power driven, and where the machine is provided with workpiece clamping the workpiece may or may not be clamped during cutting.

This European Standard does not apply to machines:

- where the workpiece is fed to the sawblade during cutting;
- designed specifically for cutting veneers;
- provided with a device situated behind the line of cut, which moves in a direction parallel to the line of cut, for automatically unloading the workpiece during the return of the saw unit to the rest position.

This European Standard is primarily directed at machines which are manufactured after the date of issue of this European Standard.

2 Normative references

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. (4)

A₁) deleted text (A₁

EN 349:1993, Safety of machinery —Minimum [A] gaps (A) to avoid crushing of parts of the human body

A₁) deleted text (A₁

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

A) EN 847-1:2005 ⟨A], Tools for woodworking — Safety requirements — Part 1: Milling tools, circular sawblades

(A) 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) deleted text (A1

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

EN 983:1996, Safety of machinery — Safety requirements for fluid power systems and their components — Pneumatics

(A) 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 [A]

EN 1088:1995, Safety of machinery — Interlocking devices associated with guards — Principles for design and selection

♠ EN 50370-1:2005, Electromagnetic compatibility (EMC) — Product family standard for machine-tools — Part 1: Emission

EN 50370-2:2003, Electromagnetic compatibility (EMC) — Product family standard for machine-tools — Part 2: Immunity (A1

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

EN 60439-1:1999, Low-voltage switchgear and controlgear assemblies — Part 1: Type-tested and partially type-tested assemblies (IEC 60439-1:1999) (A)

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

- ♠ EN 60825-1:2007, Safety of laser products Part 1: Equipment classification and requirements (IEC 60825-1:2007) ♠
- ♠ EN 60947-4-1:2001, Low-voltage switchgear and controlgear Part 4-1: Contactors and motor-starters Electromechanical contactors and motor-starters (IEC 60947-4-1:2000) ♠
- ♠ EN 60947-5-1:2004, Low voltage switchgear and control gear Part 5-1: Control circuit devices and switching elements Electromechanical control circuit devices (IEC 60947-5-1:2003)
- (A) EN 61310-1:2008, Safety of machinery Indication, marking and actuation Part 1: Requirements for visual, acoustic and tactile signals (IEC 61310-1:2007)
- EN ISO 3743-1:1995, Acoustics Determination of sound power levels of noise sources Engineering methods for small, movable 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, movable sources in reverberant fields Part 2: Methods 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, Acoustics Determination of sound power levels of noise sources using sound pressure Precision methods for anechoic and hemi-anechoic rooms (ISO 3745:2003) (4)
- 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 4871:1996, 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 discrete 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 a 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)
- ♠ 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)
- Fig. 13849-1:2008, Safety of machinery Safety-related parts of control systems Part 1: General principles for design (ISO 13849-1:2006)
- [A] EN ISO 13850:2008, Safety of machinery Emergency stop Principles for design (ISO 13850:2006) [A]

EN ISO 13857:2008, Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2008)

ISO 286-2:1988, ISO system of limits and fits — Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts

A1) deleted text (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 (A)

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 (A)

3 Terms and definitions

For the purpose of this European Standard the following terms and definitions apply.

3.1 Terms

unio, are illu. The main parts of manually loaded and/or unloaded single blade edging circular rip sawing machines with power driven saw unit and their terminology are illustrated in Figure 1.