

**Puidutöötlemismasinate ohutus.  
Ketassaagimisseadmed. Osa 3: Langetamise  
järkamissaed ja kaheotstarbelised langetamis- ja  
järkamissaed /ketassaepingid KONSOLIDEERITUD  
TEKST**

Safety of woodworking machines - Circular sawing  
machines - Part 3: Down cutting cross-cut saws and  
dual purpose down cutting cross-cut saws/circular saw  
benches CONSOLIDATED TEXT

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1870-3:2001+A1:2009 sisaldab Euroopa standardi EN 1870-3:2001+A1:2009 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 27.03.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 11.02.2009.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1870-3:2001+A1:2009 consists of the English text of the European standard EN 1870-3:2001+A1:2009.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 27.03.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 11.02.2009.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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**Võtmesõnad:** protective, safety, safety engineering, safety requirements, sawing machines, sawing machines (tools), single blade circular saws, specification (approval), specifications, wood saws, woodworking, woodworking machinery, woodworking machines, workplace safety

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English Version

**Safety of woodworking machines - Circular sawing machines -  
Part 3: Down cutting cross-cut saws and dual purpose down  
cutting cross-cut saws/circular saw benches**

Sécurité des machines pour le travail du bois - Machines à  
scier circulaires - Partie 3: Tronçonneuses à coupe  
descendante et tronçonneuses mixtes à coupe  
descendante et scies à table

Sicherheit von Holzbearbeitungsmaschinen -  
Kreissägemaschinen - Teil 3: Von oben schneidende  
Kappsägemaschinen und kombinierte Kapp- und  
Tischkreissägemaschinen

This European Standard was approved by CEN on 29 June 2001 and includes Amendment 1 approved by CEN on 27 December 2008.

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 CEN Management Centre 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 CEN Management Centre has the same status as the official versions.

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This document (EN 1870-3:2001+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 August 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This document includes Amendment 1, approved by CEN on 2008-12-27.

This document supersedes EN 1870-3:2001.

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 EU Directive(s).

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

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

Annexes A, B and C are normative, the **A1** Annexes E, ZA and ZB **A1** are informative.

**A1** 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) <sup>(A1)</sup>*

The European Standards produced by CEN/TC142 are particular to woodworking machines and complement the relevant type A and type B Standards on the subject of general safety (see introduction of <sup>(A1)</sup> EN ISO 12100-1:2003 <sup>(A1)</sup> for a description of type A, type B and type 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.

## 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**.

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 down cutting cross-cut saws and dual purpose down cutting cross-cut saws/circular saw benches.

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**.

Electrically driven machines excluded by the scope of this European Standard are covered by the requirements of **EN 61029-1:2000**, **EN 61029-2-9** and **EN 61029-2-11**.

## 1 Scope

This document deals with the significant hazards, hazardous situations and events as listed in Clause 4 which are relevant to down cutting cross-cut saws and dual purpose down cutting cross-cut saws/circular saw benches, herein after referred to as „machines“, designed to cut solid wood, chipboard, fibreboard, plywood and also these materials where they are covered with plastic edging and/or plastic/light alloy laminates.

NOTE 1 For the definition of down cutting cross-cut saws and dual purpose down cutting cross-cut saws/circular saw benches see 3.2, 3.3 and 3.4 and for the definition of displaceable machine see 3.8.

This document does not apply to:

- machines for cross cutting logs;
- hand-held motor-operated electric tools or any adaptation permitting their use in a different mode, i.e. bench mounting;

NOTE 2 Hand-held motor-operated electric tools and saw benches to form an integrated whole with a hand-held motor-operated electric tools are covered by **EN 60745-1:2003** together with **EN 60745-2-5:2003**.

- 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.

NOTE 3 Transportable motor-operated electric tools are covered by the requirements of **EN 61029-1:2000** together with **EN 61029-2-1:2002**.

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

This document is not applicable to down cutting cross-cut saws and dual purpose down cutting cross-cut saws/circular saw benches which are manufactured before the date of its publication as EN.

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.

**A1** *deleted text* **A1**

EN 574:1996, *Safety of machinery — Two hand control devices — Functional aspects, principles for design*

**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 saw blades*

**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** *deleted text* **A1**

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**

**A1** *deleted text* **A1**

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

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*

EN 1760-2:2000, *Safety of machinery — Pressure sensitive protective devices — Part 2: General principles for the design and testing of pressure sensitive edges and pressure sensitive bars*

**A1** EN 1870-1:2007 **A1**, *Safety of woodworking machines — Circular sawing machines — Part 1: Circular saw benches (with and without sliding table) and dimension saws*



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*

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)

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, requirements and user's guide* (IEC 60825-1:2007)

EN 60947-4-1:2001, *Low voltage switchgear and controlgear — Part 4: Electromechanical contactors and motor starters — Section 1: Electromechanical contactors and motor starters* (IEC 60947-4-1:2000)

EN 60947-5-1:2004, *Low-voltage switchgear and controlgear — Part 5-1: Control circuit devices and switching elements — Electromechanical control circuit devices* (IEC 60947-5-1:2003)

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

EN 61029-2-9, *Safety of transportable motor operated electric tools — Part 2-9: Particular requirements for mitre saws* (IEC 1029-2-9:1995, modified)

EN 61029-2-11, *Safety of transportable motor operated electric tools — Part 2-11: Particular requirements for combined mitre and bench saws* (IEC 61029-2-11:2001, modified)

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

CLC/TS 61496-2:2006, *Safety of machinery — Electro-sensitive protective equipment - Part 2: Particular requirements for equipment using active opto-electronic protective devices (AOPDs)* (IEC 61496-2:2006)

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: 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)

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 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 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)

▣<sub>A1</sub> 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) ▣<sub>A1</sub>

▣<sub>A1</sub> EN ISO 13849-1:2008, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design* (ISO 13849-1:2006) ▣<sub>A1</sub>

▣<sub>A1</sub> EN ISO 13850:2006, *Safety of machinery — Emergency stop — Principles for design* (ISO 13850:2006) ▣<sub>A1</sub>

▣<sub>A1</sub> EN ISO 13857:2008, *Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs* (ISO 13857:2008) ▣<sub>A1</sub>

▣<sub>A1</sub> deleted text ▣<sub>A1</sub>

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

▣<sub>A1</sub> HD 21.1 S4:2002, *Cables of rated voltages up to and including 450/750 V and having thermoplastic insulation — Part 1: General requirements* ▣<sub>A1</sub>

▣<sub>A1</sub> 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* ▣<sub>A1</sub>

▣<sub>A1</sub> HD 22.4 S4:2004, *Cables of rated voltages up to and including 450/750 V and having crosslinked insulation — Part 4: Cords and flexible cables* ▣<sub>A1</sub>