

**Puidutöötlemismasinate ohutus.  
Ketassaagimisseadmed. Osa 6: Küttepuude  
ketassaagimisseadmed ja kaheotstarbelised küttepuude  
ketassaagimismasinad/ketassaepingid, käsitsi  
pealelaadimise ja/või mahalaadimisega  
KONSOLIDEERITUD TEKST**

Safety of woodworking machines - Circular 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  
CONSOLIDATED TEXT

**EESTI STANDARDI EESSÕNA****NATIONAL FOREWORD**

<p>Käesolev Eesti standard EVS-EN 1870-6:2002+A1:2009 sisaldab Euroopa standardi EN 1870-6:2002+A1:2009 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 30.11.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 30.09.2009.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1870-6:2002+A1:2009 consists of the English text of the European standard EN 1870-6:2002+A1:2009.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 30.11.2009 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 30.09.2009.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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ICS 79.120.10

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English Version

**Safety of woodworking machines - Circular 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**

Sécurité des machines pour le travail du bois - Machines à  
scies circulaires - Partie 6: Scies circulaires à chevalet  
et/ou à table pour la coupe du bois de chauffage, avec  
chargement et/ou déchargement manuel

Sicherheit von Holzbearbeitungsmaschinen -  
Kreissägemaschinen - Teil 6:  
Brennholzkreissägemaschinen und kombinierte Brennholz-  
und Tischkreissägemaschinen, mit Handbeschickung  
und/oder Handentnahme

This European Standard was approved by CEN on 8 November 2001 and includes Amendment 1 approved by CEN on 13 August 2009.

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



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## Contents

<b>Foreword</b> .....	<b>3</b>
<b>0 Introduction</b> .....	<b>5</b>
<b>1 Scope</b> .....	<b>5</b>
<b>2 Normative references</b> .....	<b>6</b>
<b>3 Terms and definitions</b> .....	<b>8</b>
3.1 Terms.....	8
3.2 Definitions.....	11
<b>4 List of significant hazards</b> .....	<b>13</b>
<b>5 Safety requirements and/or measures</b> .....	<b>16</b>
5.1 Controls.....	16
5.2 Protection against mechanical hazards.....	20
5.3 Protection against non-mechanical hazards.....	45
<b>6 Information for use</b> .....	<b>49</b>
6.1 Warning devices.....	49
6.2 Marking.....	49
6.3 Instruction handbook.....	50
<b>Annex A (normative) Stability test</b> .....	<b>54</b>
A.1 Torsional resistance test for the pivoting log carriage.....	54
A.2 Rigidity test for a dual-purpose circular sawing machine for firewood/circular saw bench machine set in the saw bench mode.....	55
A.3 Stability test for pivoting log carriage machines.....	55
<b>Annex B (normative) Saw spindle dimensional tolerances</b> .....	<b>57</b>
<b>Annex C (normative) Riving knife mounting strength test</b> .....	<b>58</b>
<b>Annex D (normative) Riving knife lateral stability test</b> .....	<b>59</b>
<b>Annex E (normative) Test for safe log (workpiece) positioning on circular sawing machines for firewood with pivoting log carriage</b> .....	<b>60</b>
<b>Annex F (normative) Saw bench table minimum dimensions on dual-purpose circular sawing machines for firewood/circular saw benches</b> .....	<b>61</b>
<b>Annex G (normative) Saw blade guard stability test for dual purpose circular sawing machines for firewood/circular saw benches</b> .....	<b>62</b>
G.1 General.....	62
G.2 Machines with saw blade guards with lead-in.....	62
G.3 Machines with saw blade guards with in-feed rollers.....	62
<b>Annex ZA (informative)  Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC </b> .....	<b>65</b>
<b>Annex ZB (informative)  Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC </b> .....	<b>66</b>
<b>Bibliography</b> .....	<b>67</b>

## Foreword

This document (EN 1870-6:2002+A1:2009) has been prepared by Technical Committee 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 2009-08-13.

This document supersedes EN 1870-6:2002.

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

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 European Committee of Woodworking Machinery Manufacturers Association "EUMABOIS".

Annexes A, B, C, D, E, F and G are normative and **A1** Annexes ZA and ZB **A1** are informative.

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 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>*

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 circular sawing machines for firewood and dual-purpose circular sawing machines for firewood/circular saw benches, with 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 **EN 847-1:2005**.

## 1 Scope

This document deals with all significant hazards, hazardous situations and events as listed in Clause 4 which are relevant to firewood and dual-purpose circular sawing machines for firewood/circular saw benches, with manual loading and/or unloading, hereinafter referred to as “machines”, designed to cut solid wood.

On Combined circular sawing machines for firewood - Log splitting machines only the circular sawing machine for firewood is covered by this European Standard. For the requirements for the log splitting part of this machine see **EN 609-1: 1999** and **EN 609-2: 1999**.

*deleted text*

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

This European Standard does not apply to:

- log sawing machines where the saw unit moves to cut the workpiece;
- machines where the saw blade is capable of tilting;
- hand-held motor-operated electric tools or any adaptation permitting their use in a different mode, i.e. bench mounting;

**NOTE 1** 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 60745-1:2006** together with **EN 60745-2-5:2007**.

- machines driven by an internal combustion engine

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

**NOTE 2** Machines covered by this European Standard are listed under A.1.1 and/or A.1.2 of annex IV of the Machinery Directive

## 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 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* **[A1]**, **[A1]** *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]**

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EN 982, *Safety of machinery — Safety requirements for fluid power systems and their components — Hydraulics*

EN 983, *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]** *deleted text* **[A1]**



**[A1]** 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]**



**[A1]** EN 60204-1:2006 **[A1]**, *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, *Degrees of protection provided by enclosures (IP code)* (IEC 60529:1989)

 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) 

 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, *Acoustics — Determination of sound power levels of noise sources — 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,  *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, *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 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 4254-1:2005, *Agricultural machinery — Safety — Part 1: General requirements* (ISO 4254-1:2005) 


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


EN ISO 9614-1, *Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 1: Measurements 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, *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 and 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) 

EN ISO 13849-1:2008, *Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design* (ISO 13849-1:2006)

EN ISO 13850:2008, *Safety of machinery — Emergency stop — Principles for design* (ISO 13850:2006)

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

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

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

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*

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*

### 3 Terms and definitions

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

#### 3.1 Terms

The different types of circular sawing machines for firewood and dual-purpose circular sawing machines for firewood/circular saw benches and their main parts of the machine are illustrated in the Figures 1, 2, 3 and 4.

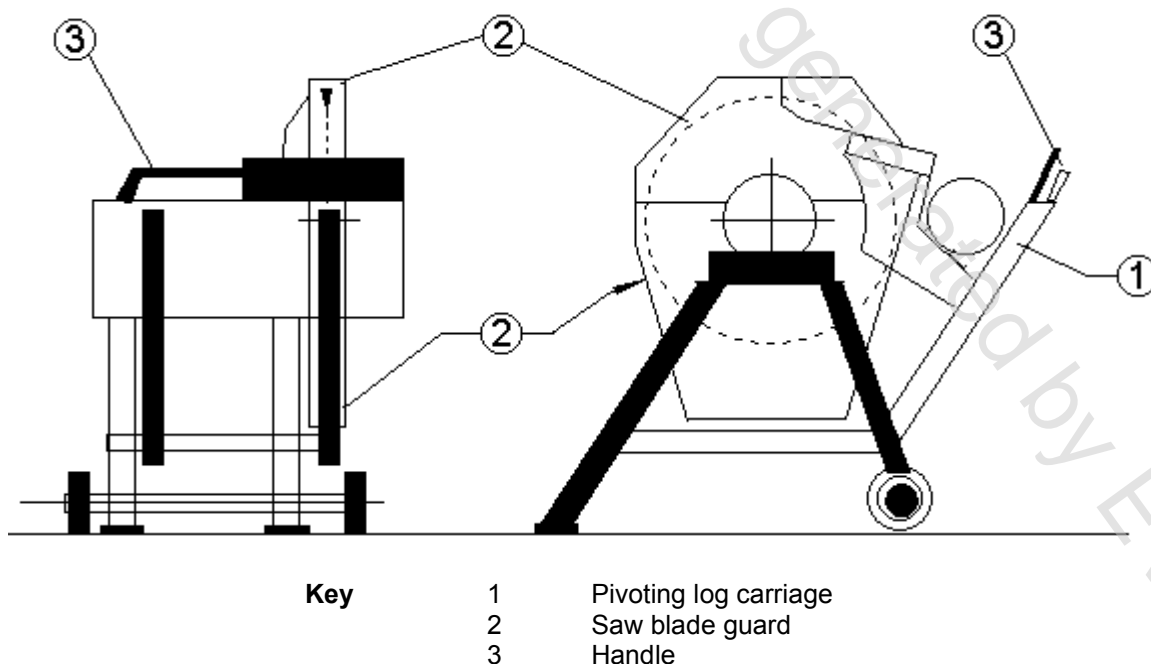


Figure 1 — Example of a circular sawing machine for firewood with pivoting log carriage