

**Puidutöötlemismasinate ohutus.
Ketassaagimisseadmed. Osa 9: Kahekettalised
järgkamise ketassaagimisseadmed integreeritud sööte ja
käsitsi laadimise ja/või tühjendamisega**

**Safety of woodworking machines - Circular sawing
machines - Part 9: Double blade circular sawing
machines for cross-cutting with integrated feed and with
manual loading and/or unloading**

EESTI STANDARDI EESSÕNA

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English Version

**Safety of woodworking machines - Circular sawing machines -
Part 9: Double blade circular sawing machines for cross-cutting
with integrated feed and with manual loading and/or unloading**

Sécurité des machines pour le travail du bois - Machines à
scies circulaires - Partie 9: Machines à scier à deux lames
de scie circulaires pour tronçonnage, à avance mécanisée
et à chargement et/ou déchargement manuels

Sicherheit von Holzbearbeitungsmaschinen -
Kreissägemaschinen - Teil 9:
Doppelgehrungskreissägemaschinen mit mechanischem
Vorschub und Handbeschickung und/oder Handentnahme

This European Standard was approved by CEN on 13 July 2012.

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Foreword

This document (EN 1870-9:2012) 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of an identical text or by endorsement, at the latest by March 2013, and conflicting national standards shall be withdrawn at the latest by March 2013.

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 supersedes EN 1870-9:2000+A1:2009.

The main modifications to the previous version concern inclusion of performance levels (PL).

This document 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 2006/42/EC, see informative Annex ZA, which is an integral part of this document.

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

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 (the present document)*
- *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)*
- *Part 18: Dimension saws*
- *Part 19: Circular saw benches (with and without sliding table) and building site saws*

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 12100:2010 for a description of A, B and C standards).

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This document 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 document is a type C standard as defined in EN ISO 12100:2010.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered is indicated in the scope of this document.

The requirements of this document are directed to manufacturers and their authorised representatives of double blade circular sawing machines for cross-cutting with integrated feed and with manual loading and/or unloading. This document is also useful for designers and importers.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of other standards, for machines that have been designed and built according to the provisions of this type C standard. This document also includes information to be provided by the manufacturer to the user.

Common requirements for tooling are given in EN 847-1:2005+A1:2007.

1 Scope

This European Standard deals with all significant hazards, hazardous situations and events as listed in Clause 4 which are relevant to double blade circular sawing machines for cross-cutting with integrated feed of the saw units and with manual loading and/or unloading, hereinafter referred to as 'machines'. These are machines designed to cut solid wood, chipboard, fibreboard and plywood, and also these materials when covered with plastic edging and/or plastic/light alloy laminate, when they are used as intended and under the conditions foreseen by the manufacturer including reasonably foreseeable misuse.

This document does not apply to:

- machines for cross cutting logs;
- double blade up-cutting cross-cut sawing machines.

This document is not applicable to machines which are manufactured before its date of publication as an EN.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 574:1996+A1:2008, *Safety of machinery — Two hand control devices — Functional aspects — Principles for design*

EN 614-1:2006+A1:2009, *Safety of machinery — Ergonomic design principles — Part 1: Terminology and general principles*

EN 847-1:2005+A1:2007, *Tools for woodworking — Safety requirements — Part 1: Milling tools, circular saw blades*

EN 894-1:1997+A1:2008, *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+A1:2008, *Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 2: Displays*

EN 894-3:2000+A1:2008, *Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 3: Control actuators*

EN 1005-1:2001+A1:2008, *Safety of machinery — Human physical performance — Part 1: Terms and definitions*

EN 1005-2:2003+A1:2008, *Safety of machinery — Human physical performance — Part 2: Manual handling of machinery and component parts of machinery*

EN 1005-3:2002+A1:2008, *Safety of machinery — Human physical performance — Part 3: Recommended force limits for machinery operation*

EN 1005-4:2005+A1:2008, *Safety of machinery — Human physical performance — Part 4: Evaluation of working postures and movements in relation to machinery*

EN 1037:1995+A1:2008, *Safety of machinery — Prevention of unexpected start-up*

EN 1088:1995+A2:2008, *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection*

EN 1760-1:1997+A1:2009, *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 1760-2:2001+A1:2009, *Safety of machinery — Pressure sensitive protective devices — Part 2: General principles for the design and testing of pressure sensitive edges and pressure sensitive bars*

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

EN 60529:1991, *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)¹⁾*

EN 60825-1:2007, *Safety of laser products — Part 1: Equipment classification and requirements (IEC 60825-1:2007)*

EN 61310-1:2008, *Safety of machinery — Indication, marking and actuation — Part 1: Requirements for visual, acoustic 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 61800-5-2:2007, *Adjustable speed electrical power drive systems — Part 5-2: Safety requirements — Functional (IEC 61800-5-2:2007)*

EN ISO 3743-1:2010, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering methods for small, movable sources in reverberant fields — Part 1: Comparison method for a hard-walled test room (ISO 3743-1:2010)*

EN ISO 3743-2:2009, *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 3744:2010, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering methods for an essentially free field over a reflecting plane (ISO 3744:2010)*

EN ISO 3745:2009, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Precision methods for anechoic and hemi-anechoic rooms (ISO 3745:2003)²⁾*

EN ISO 3746:2010, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane (ISO 3746:2010)*

EN ISO 4413:2010, *Hydraulic fluid power — General rules and safety requirements for systems and their components (ISO 4413:2010)*

EN ISO 4414:2010, *Pneumatic fluid power — General rules and safety requirements for systems and their components (ISO 4414:2010)*

EN ISO 4871:2009, *Acoustics — Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996)*

1) EN 60529:1991 is impacted by EN 60529:1991/A1:2000.

2) EN ISO 3745:2009 has been replaced by EN ISO 3745:2012.

EN ISO 9614-1:2009, *Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 1: Measurement at discrete points (ISO 9614-1:1993)*

EN ISO 11202:2010, *Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions applying approximate environmental corrections (ISO 11202:2010)*

EN ISO 11204:2010, *Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions applying accurate environmental corrections (ISO 11204:2010)*

EN ISO 11688-1:2009, *Acoustics — Recommended practice for the design of low-noise machinery and equipment — Part 1: Planning (ISO/TR 11688-1:1995)*

EN ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction (ISO 12100:2010)*

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)*

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

3 Terms and definitions

3.1 General

For the purposes of this document, the terms and definitions given in EN ISO 12100:2010 and the following apply.

3.2 Definitions

3.2.1

cross-cutting

operation of cutting across the grain of a wooden workpiece

3.2.2

double blade circular sawing machine for cross-cutting with integrated feed and with manual loading and/or unloading

machine fitted with two sawing units for cross-cutting, which has integrated feed and the workpiece is manually loaded and/or unloaded and stationary during cutting

Note 1 to entry: The cutting stroke can be downwards or horizontal. One or both sawing units can be adjusted horizontally and may be canted and/or pivoted.

3.2.3

semi-automatic double blade circular sawing machine for cross-cutting

machine where the saw units have integrated feed which is initiated manually and the workpiece is positioned manually or by means of a positioning mechanism for cutting to length

Note 1 to entry: The cutting stroke can be downwards or horizontal.