



BSI Standards Publication

# Safety of woodworking machines — Circular sawing machines

Part 11: Semi automatic horizontal cross-cut sawing machines with one saw unit (radial arm saws)

**National foreword**

This British Standard is the UK implementation of EN 1870-11:2013. It supersedes BS EN 1870-11:2003+A1:2009 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee MTE/23, Woodworking machines.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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English Version

**Safety of woodworking machines - Circular sawing machines -  
Part 11: Semi automatic horizontal cross-cut sawing machines  
with one saw unit (radial arm saws)**

Sécurité des machines pour le travail du bois - Machines à  
scies circulaires - Partie 11: Tronçonneuses semi-  
automatiques à coupe horizontale avec une unité de sciage  
(scies circulaires radiales)

Sicherheit von Holzbearbeitungsmaschinen -  
Kreissägemaschinen - Teil 11: Halbautomatische  
waagrecht schneidende Auslegerkreissägemaschinen mit  
einem Sägeaggregat (Radialsägen)

This European Standard was approved by CEN on 24 August 2013.

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**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## Foreword

This document (EN 1870-11:2013) 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of an identical text or by endorsement, at the latest by April 2014, and conflicting national standards shall be withdrawn at the latest by April 2014.

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 1870-11:2003+A1:2009.

The main modifications to the previous version include:

- the deletion of automatic machines;
- the deletion of displaceable machines fitted with wheels;
- introduction of PL;
- more precise requirements for braking function and for access to the saw blade for change;
- to require the fence to be located on both sides of the cutting line.

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, see informative Annex ZA, which is an integral part of this document.

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: Multiblade 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 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.*

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

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 covered are indicated in the scope of this document.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this C type 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.

The requirements of this document are directed to manufacturers and their authorised representatives of semi-automatic horizontal cutting cross-cut sawing machines with one saw unit (radial arm saws). It is also useful for designers.

This document also includes examples of information which can be provided by the manufacturer to the user.

Common requirements for tooling are given in EN 847-1:2013.



## 1 Scope

This European Standard deals with all significant hazards, hazardous situations and events as listed in Clause 4 which are relevant to semi-automatic horizontal cutting cross-cut sawing machines with one saw unit (radial arm saws), hereinafter referred to as "machines", designed to cut solid wood, chipboard, fibreboard, plywood and also these materials when covered with plastic edging and/or plastic/light alloy laminates when they are used as intended and under the conditions foreseen by the manufacturer including reasonably foreseeable misuse. Machines which are designed to work wood based materials may also be used for working rigid plastic materials with similar physical characteristics as wood.

Any work-piece positioning equipment fitted to the machine is included in this European Standard.

This European Standard does not apply to machines:

- a) with manual feed of the saw unit; or
- b) for cross cutting logs; or
- c) specifically designed for sawing and/or milling roof timber frames; or
- d) fitted with hydraulic braking systems.

NOTE 1 Radial arm saws with manual feed of the saw unit (the saw unit is moved by hand) are dealt with in EN 1870-17:2012 and EN 61029-2-2:2009.

NOTE 2 The requirements of this European Standard apply to all machines whatever their method of control, e.g. electromechanical and/or electronic.

This European Standard is not applicable to machines which are manufactured before the date of its publication as EN.

NOTE 3 Machines covered by this European Standard are listed under 1.4 of Annex IV of the Machinery Directive.

## 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 847-1:2013, *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*