



**NSAI**  
Standards

Irish Standard  
I.S. EN 1870-15:2012

Safety of woodworking machines -  
Circular sawing machines - Part 15: Multi-  
blade cross-cut sawing machines with  
integrated feed of the workpiece and  
manual loading and/or unloading

## I.S. EN 1870-15:2012

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWIFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

*This document replaces:*  
EN 1870-15:2004+A1:2009

<i>This document is based on:</i> EN 1870-15:2012	<i>Published:</i> 24 October, 2012
--	---------------------------------------

This document was published under the authority of the NSAI and comes into effect on:  
24 October, 2012

**ICS number:**  
79.120.10

**NSAI**  
1 Swift Square,  
Northwood, Santry  
Dublin 9

T +353 1 807 3800  
F +353 1 807 3838  
E standards@nsai.ie  
W NSAI.ie

**Sales:**  
T +353 1 857 6730  
F +353 1 857 6729  
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

English Version

**Safety of woodworking machines - Circular sawing machines -  
Part 15: Multi-blade cross-cut sawing machines with integrated  
feed of the workpiece and manual loading and/or unloading**

Sécurité des machines pour le travail du bois - Machines à  
scies circulaires - Partie 15: Machines à scier multi-lames  
pour tronçonnage à avance mécanisée de la pièce et  
chargement et/ou déchargement manuels

Sicherheit von Holzbearbeitungsmaschinen -  
Kreissägemaschinen - Teil 15:  
Mehrfachablängkreissägemaschinen mit mechanischem  
Vorschub für das Werkstück und Handbeschickung  
und/oder Handentnahme

This European Standard was approved by CEN on 4 August 2012.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.



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

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

## Contents

Page

Foreword.....	4
Introduction .....	6
1 Scope .....	7
2 Normative references .....	7
3 Terms and definitions .....	9
3.1 General.....	9
3.2 Definitions .....	9
4 List of significant hazards .....	12
5 Safety requirements and/or measures .....	15
5.1 General.....	15
5.2 Controls .....	15
5.2.1 Safety and reliability of control systems.....	15
5.2.2 Position of controls .....	16
5.2.3 Starting .....	16
5.2.4 Normal stopping .....	17
5.2.5 Emergency stop .....	17
5.2.6 Integrated feed .....	18
5.2.7 Control duplication .....	18
5.2.8 Failure of the power supply .....	19
5.3 Protection against mechanical hazards .....	19
5.3.1 Stability .....	19
5.3.2 Risk of break-up during operation .....	19
5.3.3 Tool holder and tool design.....	20
5.3.4 Braking.....	22
5.3.5 Devices to minimise the possibility or the effect of ejection .....	23
5.3.6 Work-piece supports and guides .....	24
5.3.7 Prevention of access to moving parts.....	24
5.4 Protection against non-mechanical hazards .....	29
5.4.1 Fire .....	29
5.4.2 Noise .....	29
5.4.3 Emission of chips and dust .....	30
5.4.4 Electricity .....	31
5.4.5 Ergonomics and handling.....	31
5.4.6 Lighting.....	32
5.4.7 Pneumatic.....	32
5.4.8 Hydraulic.....	32
5.4.9 Electromagnetic compatibility.....	32
5.4.10 Laser .....	32
5.4.11 Static electricity .....	33
5.4.12 Errors of fitting.....	33
5.4.13 Isolation .....	33
5.4.14 Maintenance .....	34
6 Information for use .....	34
6.1 General.....	34
6.2 Warnings and warning devices .....	34
6.3 Marking .....	34
6.4 Instruction handbook .....	35
Annex A (normative) Saw spindle dimensional tolerances .....	39

<b>Annex B (normative) Stability test for the deterring/impeding device required in 5.3.7.1.2 .....</b>	<b>40</b>
<b>Annex C (normative) Operating conditions for noise emission measurement.....</b>	<b>41</b>
<b>Annex D (normative) Braking tests .....</b>	<b>43</b>
<b>D.1 Conditions for all tests.....</b>	<b>43</b>
<b>D.2 Tests .....</b>	<b>43</b>
<b>D.2.1 Un-braked run-down time .....</b>	<b>43</b>
<b>D.2.2 Braked run-down time.....</b>	<b>43</b>
<b>Annex E (normative) Impact test method for guards .....</b>	<b>44</b>
<b>E.1 General .....</b>	<b>44</b>
<b>E.2 Test method .....</b>	<b>44</b>
<b>E.2.1 Preliminary remarks .....</b>	<b>44</b>
<b>E.2.2 Testing equipment.....</b>	<b>44</b>
<b>E.2.3 Projectile for guards.....</b>	<b>44</b>
<b>E.2.4 Sampling.....</b>	<b>44</b>
<b>E.2.5 Test procedure.....</b>	<b>44</b>
<b>E.3 Results.....</b>	<b>45</b>
<b>E.4 Assessment .....</b>	<b>45</b>
<b>E.5 Test report.....</b>	<b>45</b>
<b>E.6 Test equipment for impact test.....</b>	<b>45</b>
<b>Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC .....</b>	<b>47</b>
<b>Bibliography.....</b>	<b>50</b>

## Foreword

This document (EN 1870-15:2012) 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 April 2013, and conflicting national standards shall be withdrawn at the latest by April 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 1870-15:2004+A1:2009.

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 EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

The main technical modification to the 2009 edition relates to the introduction of performance levels (PL).

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: Multiblade rip sawing machines with manual loading and/or unloading;*
- *Part 5: Circular sawbenches/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 (radial arm saws);*
- *Part 18: Dimension saws (at Enquiry stage at the time of publication of the present document);*
- *Part 19: Circular saw benches (with and without sliding table) and building site saws (at Enquiry stage at the time of publication of the present document).*

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 multi-blade cross-cut sawing machines with integral feed of the work-piece and manual loading and/or unloading. It is also useful for designers and importers.

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 specifies all requirements and/or measures to reduce the hazards and limit the risks on multi-blade cross-cut sawing machines (with minimum two saw unit) with integrated feed of the work-piece and manual loading and/or unloading fitted with a saw blade drive motor for each saw unit, hereinafter 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, when they are used as intended and under the conditions foreseen by the manufacturer including reasonably foreseeable misuse.

This document deals with all significant hazards, hazardous situations and events which are relevant to these machines as stated in Clause 4. It does not deal with any hazards relating to the mechanical loading and/or unloading of the work-piece or which result from the combination of the machine with any other.

This document does not cover machines designed for climb cutting (see 3.2.10).

The requirements of this document apply to all machines whatever their method of control e.g. electromechanical and/or electronic and/or pneumatic.

This document is not applicable to multi-blade cross-cut sawing machines with integrated feed of the work-piece and manual loading and/or unloading which are manufactured before the date of its publication as EN.

NOTE Machines covered by this document are listed under 1.3 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 614-1:2006+A1:2009, *Safety of machinery — Ergonomic design principles — Part 1: Terminology and general principles*

EN 614-2:2000+A1:2008, *Safety of machinery — Ergonomic design principles — Part 2: Interactions between the design of machinery and work tasks*

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*

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
  - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-