

**SLOVENSKI STANDARD**  
**SIST EN 1870-9:2000/kprA1:2009**  
**01-maj-2009**

---

**Varnost lesnoobdelovalnih strojev - Krožne žage - 9. del: Dvolistne krožne žage za prečni prerez z vgrajenim podajalnikom ter z ročnim podajanjem in/ali odvzemom**

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

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

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

**Ta slovenski standard je istoveten z: EN 1870-9:2000/prA1**

---

**ICS:**

25.080.60	Strojne žage	Sawing machines
79.120.10	Lesnoobdelovalni stroji	Woodworking machines

**SIST EN 1870-9:2000/kprA1:2009**      **en,fr,de**



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**FINAL DRAFT**  
**EN 1870-9:2000**

**prA1**

February 2009

---

ICS 79.120.10

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  
scier 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 draft amendment is submitted to CEN members for unique acceptance procedure. It has been drawn up by the Technical Committee CEN/TC 142.

This draft amendment A1, if approved, will modify the European Standard EN 1870-9:2000. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

This draft amendment was established by CEN 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.

CEN members are the national standards bodies of 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.

**Warning** : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

**Management Centre: rue de Stassart, 36 B-1050 Brussels**

## Contents

Page

Foreword.....	3
1      Modification to the Foreword .....	4
2      Modification to Clause 1, Scope.....	4
3      Modification to Clause 2, Normative references .....	4
4      Modification to Clause 3, Definitions.....	6
5      Modification to Clause 4, List of hazards .....	6
6      Modification to Clause 5, Safety requirements and/or protective measures (hanging paragraph) .....	8
7      Modification to 5.1.1, Safety and reliability of control systems .....	8
8      Modification to 5.1.2, Position of controls .....	8
9      Modification to 5.1.3, Starting.....	9
10     Modification to 5.1.5, Emergency stop .....	9
11     Modification to 5.1.8, Failure of the power supply .....	9
12     Modification to 5.2.2, Risk of break-up during operation .....	9
13     Modification to 5.2.3.1, Spindle locking.....	9
14     Modification to 5.3.1, Fire and explosion .....	9
15     Modification to 5.3.4, Electricity .....	10
16     Modification to 5.3.5, Ergonomics and handling .....	10
17     Modification to 5.3.12, Laser.....	10
18     Modification to 5.3.15, Isolation .....	11
19     Modification to 5.3.16, Maintenance .....	11
20     Modification to Clause 6, Information for use (hanging paragraph) .....	11
21     Modification to 6.2, Marking of the machine.....	11
22     Modification to 6.3, Instruction handbook .....	12
23     Modification to Annex B.....	14
24     Modification to Annex ZA, Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC .....	14
25     Addition of Annex ZB, Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC .....	15

## Foreword

This document (EN 1870-9:2000/prA1:2009) has been prepared by Technical Committee CEN/TC 142 “Woodworking machines - Safety”, the secretariat of which is held by UNI.

This document is currently submitted to the Unique Acceptance Procedure.

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 Annexes ZA and ZB, which are integral parts of this document.

## 1 Modification to the Foreword

*Replace the fourth paragraph with the following:*

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

*In the 6<sup>th</sup> paragraph, replace "annex B, C and ZA" with "Annexes ZA and ZB".*

## 2 Modification to Clause 1, Scope

*Replace the first paragraph with: "This document deals with the 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 and with manual loading and/or unloading, 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 laminate."*

*Delete the third paragraph.*

## 3 Modification to Clause 2, Normative references

*Replace the standard paragraph with the following: "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."*

*Delete reference EN 292-1:1991 in Clause 2 and replace "EN 292-1:1991" with "EN ISO 12100-1:2003" throughout the document.*

*Delete references EN 292-2:1991 and EN 292-2/A1:1995.*

*Delete reference EN 294:1992 and replace it with "EN ISO 13857:2008, Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2008)". Replace "EN 294:1992" with "EN ISO 13857:2008" throughout the document.*

*Replace reference to EN 418:1992 with "EN ISO 13850, Safety of machinery — Emergency stop — Principles for design (ISO 13850:2006)" and replace "EN 418:1992" in 5.1.5, 1<sup>st</sup> paragraph, with "EN ISO 13850".*

*Replace "EN 847-1:1997" with "EN 847-1:2005" throughout the document and in the title replace "and" between "tools" and "circular" with a comma.*

*Delete reference EN 954-1:1996 and replace it with "EN ISO 13849-1:2008, Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design (ISO 13849-1:2006)". Replace "EN 954-1:1996" with "EN ISO 13849-1:2008" throughout the document.*

*Replace "prEN 1760-2:1996" with "EN 1760-2:2001, Safety of machinery - Pressure sensitive protective devices - Part 2: General principles for the design and testing of pressure sensitive edges and pressure sensitive bars" and replace "prEN 1760-2:1996" with "EN 1760-2:2001" throughout the document.*

*Replace "EN 60204-1:1992" with "EN 60204-1:2006" and replace in the title "(IEC 60204-1:1992)" with "(IEC 60204-1:2005, modified)".*

*In the title of EN 60529:1991, replace "(IEC 529: 1989)" with "(IEC 60529:1989)".*

*Replace reference to "EN 60825-1:1994" with "EN 60825-1:2007, Safety of laser products — Part 1: Equipment classification and requirements (IEC 60825-1:2007)".*

*Replace reference to "EN 60947-4-1:1992" with "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)" and "EN 60947-4-1:1992" with "EN 60947-4-1:2001" throughout the document.*

*Replace "EN 60947-5-1:1997" with "EN 60947-5-1:2004" throughout the document and replace in the title "(IEC 60947-5-1:1997)" with "(IEC 60947-5-1:2003)".*

*Replace "prEN 61496-2:1997" with "CLC/TS 61496-2:2006" in Clause 2 and throughout the document and the 3<sup>rd</sup> element of the title with "Part 2: Particular requirements for equipment using active opto-electronic protective devices (AOPDs) (IEC 61496-2:2006)".*

*Replace "EN ISO 11204:1996" with "EN ISO 11204:1995" throughout the document.*

*Replace reference to "ISO 3745:1977" with "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)" and replace "ISO 3745:1977" with "EN ISO 3745:2003" throughout the document.*

*Replace reference to "HD 21.1 S3:1997" with "HD 21.1 S4:2002, Cables of rated voltages up to and including 450/750 V and having thermoplastic insulation — Part 1: General requirements" and replace "HD 21.1 S3:1997" with "HD 21.1 S4:2002" throughout the document.*

*Replace reference to "HD 22.1 S3:1997" with "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" and replace "HD 22.1 S3:1997" with "HD 22.1 S4:2002" throughout the document.*

*Add the following references:*

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

*"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",*

*"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",*

*"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 1870-9:2000/prA1:2009 (E)**

"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)*".

**4 Modification to Clause 3, Definitions**

*Definition 3.13, replace the term with "information from the supplier".*

**5 Modification to Clause 4, List of hazards**

*Replace the title of Clause 4 with: "List of significant hazards".*

*Replace the clause content with:*

"This clause contains the significant hazards, hazardous situations and events (see EN 1050:1996) as far as they are dealt with in this document, identified by risk assessment as significant for the machines as defined in the scope and which require action to eliminate or reduce the risk. This document deals with these significant hazards by defining safety requirements and/or measures or by reference to relevant standards.

These hazards are listed in Table 1 in accordance with Annex A of EN 1050:1996.

**Table 1 — List of significant hazards**

No	Hazards, hazardous situations and hazardous events	EN ISO 12100		Relevant sub-clause of this document
		Part 1: 2003	Part 2: 2003	
1	<b>Mechanical hazards</b> related to:			
	- machine parts or workpieces:			
	a) shape;	4.2	4.2.1, 4.2.2, 5	5.2.3, 5.2.7, 5.2.8
	b) relative location;			5.1.2, 5.1.3, 5.2.6, 5.2.7, 5.2.8
	d) mass and velocity (kinetic energy of elements in controlled or uncontrolled motion);			5.2.7
	e) mechanical strength.			5.2.2, 5.2.3, 5.2.6
	- accumulation of energy inside the machinery:			
g) liquids and gases under pressure;	4.2	4.10, 5.5.4	5.3.7, 5.3.8	
1.1	Crushing hazard	4.2.1		5.2.7, 5.2.8
1.2	Shearing hazard			5.2.7, 5.2.8



1.3	Cutting or severing hazard			5.2.2, 5.2.3, 5.2.7,
1.4	Entanglement hazard			5.2.7
1.5	Drawing-in or trapping hazard			5.2.7
1.9	High pressure fluid injection or ejection hazard			5.3.7, 5.3.8
2	<b>Electrical hazards</b> due to:			
2.1	Contact of persons with live parts (direct contact)	4.3	4.9, 5.5.4	5.3.4, 5.3.15, 5.3.16
2.2	Contact of persons with parts which have become live under faulty conditions (indirect contact)	4.3	4.9	5.3.4, 5.3.15, 5.3.16
4	<b>Hazards generated by noise</b> , resulting in:			
4.1	Hearing loss (deafness), other physiological disorders (loss of balance, loss of awareness)	4.5	4.2.2, 5	5.3.2
4.2	Interference with speech communication, acoustic signals.			5.3.2
6	<b>Hazards generated by radiation</b>			
6.5	Lasers	4.7		5.3.12
7	<b>Hazards generated by materials and substances</b> (and their constituent elements) processed or used by the machinery			
7.1	Hazards from contact with or inhalation of harmful fluids and dusts	4.8	4.3b, 4.4	5.3.3
7.2	Fire hazard	4.8	4.4	5.3.1, 5.3.3
8	<b>Hazards generated by neglecting ergonomic principles in machinery design</b> related to:			
8.1	Unhealthy postures or excessive effort	4.9	4.7, 4.8.2, 4.11.12, 5.5.5, 5.5.6	5.1.2
8.2	Hand-arm or foot-leg anatomy	4.9	4.8.3	5.1.2
8.4	Local lighting		4.8.6	6.3
8.6	Human error, human behaviour		4.8, 4.11.8, 4.11.10, 5.5.2, 6	6.3
8.7	Design, location or identification of manual controls		4.8.7, 4.11.8	5.1.2
8.8	Design or location of visual display units		4.8.8, 6.2	5.1.2
9	<b>Combination of hazards</b>	4.11		5.1.7
10	<b>Unexpected start up, unexpected overrun/overspeed</b> (or any similar malfunction) from:			
10.1	Failure/disorder of the control system		4.11, 5.5.4	5.1.1
10.2	Restoration of energy supply after an interruption		4.11.4	5.1.8, 5.1.9, 5.3.7, 5.3.8