



**SLOVENSKI STANDARD**  
**SIST EN 1870-4:2002/kprA1:2009**

**01-april-2009**

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**Varnost lesnoobdelovalnih strojev - Krožne žage - 4. del: Večlistne krožne žage za vzdolžni prerez z ročnim podajanjem in/ali odvzemom**

Safety of woodworking machines - Circular sawing machines - Part 4: Multiblade rip sawing machines with manual loading and/or unloading

Sicherheit von Holzbearbeitungsmaschinen - Kreissägemaschinen - Teil 4: Mehrblattkreissägemaschinen für Längsschnitt mit Handbeschickung und/oder Handentnahme

Sécurité des machines pour le travail du bois - Machines à scies circulaires - Partie 4: Scies circulaires à déligner multilames à chargement et/ou déchargement manuel

**Ta slovenski standard je istoveten z: EN 1870-4:2001/prA1**

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**ICS:**

25.080.60	Strojne žage	Sawing machines
79.120.10	Lesnoobdelovalni stroji	Woodworking machines

**SIST EN 1870-4:2002/kprA1:2009**      **en,fr,de**



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**FINAL DRAFT**  
**EN 1870-4:2001**

**prA1**

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ICS 79.120.10

English Version

**Safety of woodworking machines - Circular sawing machines -  
Part 4: Multiblade rip sawing machines with manual loading  
and/or unloading**

Sécurité des machines pour le travail du bois - Machines à  
scies circulaires - Partie 4: Scies circulaires à délogner  
multilames à chargement et/ou déchargement manuel

Sicherheit von Holzbearbeitungsmaschinen -  
Kreissägemaschinen - Teil 4:  
Mehrblattkreissägemaschinen für Längsschnitt mit  
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 1870-4:2001. 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.

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

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## Foreword

This document (EN 1870-4:2001/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.

**EN 1870-4:2001/prA1:2009 (E)****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 "annexes B 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 multi-blade rip sawing machines as defined, herein after 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."*

*and delete the second 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/A1:1995.*

*Replace reference EN 294:1992 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 reference to EN 418:1992 with "EN ISO 13850:2008, 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, Tools for woodworking - Safety requirements – Part 1: Milling tools and circular sawblades" with "EN 847-1:2005, Tools for woodworking – Safety requirements – Part 1: Milling tools, circular saw blades" throughout the document.*

*Replace reference EN 954-1:1996 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)" in Clause 2 and throughout the text.*

*Replace the title of EN 1088:1995 with "Safety of machinery – Interlocking devices associated with guards – Principles for design and selection".*

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

*design and testing of pressure sensitive edges and pressure sensitive bars" and "prEN 1760-2:1996" with "EN 1760-2:2001" throughout the text.*

*Replace "EN 60204-1:1992" with "EN 60204-1:2006" and replace in the title "(IEC 60204-1:1992, modified)" 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 "EN 60947-4-1:1992" with "EN 60947-4-1:2001" throughout the document and replace in the title "(IEC 60947-4-1:1990)" with "(IEC 60947-4-1:2000)".*

*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 the 1<sup>st</sup> part of the title of ISO 7960:1995 with the following: "Airborne noise emitted by machine tools".*

*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 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",*

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"EN 60439-1:1999, *Low-voltage switchgear and controlgear assemblies — Part 1: Type-tested and partially type-tested assemblies (IEC 60439-1:1999)*",

"EN 61310-1:2008, *Safety of machinery — Indication, marking and actuation — Part 1: Requirements for visual, acoustic and tactile signals (IEC 61310-1:2007)*" and

"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, Terms and definitions**

*In definition 3.17 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, 5.2.5, 5.2.7
	b) relative location;			5.1.2, 5.2.5, 5.2.6
	c) mass and stability (potential energy of elements which may move under the effect of gravity)			5.2.6
	d) mass and velocity (kinetic energy of elements in controlled or uncontrolled motion);			5.2.5, 5.2.6
e) mechanical strength.			5.2.2, 5.2.5	



	- 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		5.2.5, 5.2.6, 5.2.7
1.2	Shearing hazard			5.2.5, 5.2.6, 5.2.7
1.3	Cutting or severing hazard			5.2.2, 5.2.3, 5.2.4, 5.2.5, 5.2.6, 5.2.7
1.4	Entanglement hazard			5.2.7
1.5	Drawing-in or trapping hazard			5.2.7
1.6	Impact hazard			5.2.2, 5.2.5
1.7	Stabbing and puncture hazard			5.2.2, 5.2.5
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
2.2	Contact of persons with parts which have become live under faulty conditions (indirect contact)	4.3	4.9	5.3.4
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		5.3.13
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
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