



**SLOVENSKI STANDARD**  
**SIST EN 940:2000/kprA1:2009**  
**01-april-2009**

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**Varnost lesnoobdelovalnih strojev - Kombinirani lesnoobdelovalni stroji**

Safety of woodworking machines - Combined woodworking machines

Sicherheit von Holzbearbeitungsmaschinen - Kombinierte Holzbearbeitungsmaschinen

Sécurité des machines pour le travail du bois - Machines combinées pour le travail du bois

**Ta slovenski standard je istoveten z: EN 940:1997/prA1**

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**ICS:**

79.120.10      Lesnoobdelovalni stroji      Woodworking machines

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English Version

## Safety of woodworking machines - Combined woodworking machines

Sécurité des machines pour le travail du bois - Machines combinées pour le travail du bois

Sicherheit von Holzbearbeitungsmaschinen - Kombinierte Holzbearbeitungsmaschinen

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 940:1997. 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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COMITÉ EUROPÉEN DE NORMALISATION  
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## Foreword

This document (EN 940:1997/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 940:1997/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."

**2 Modification to Clause 1, Scope**

*Replace first paragraph with:*

"This document specifies the significant hazards, hazardous situations and events as listed in Clause 4 which are relevant to stationary and displaceable combined woodworking machines with two or more of only the following integrated units:

- surface planing,
- circular sawing (working simultaneously or not with vertical spindle moulding unit),
- vertical spindle moulding,
- boring [mortising] and
- thickness planing)

hereinafter referred to as machines, designed to cut solid wood, chipboard, fibreboard, plywood, and also these materials where they are covered with plastic laminates or edging or veneer, when they are used as intended and under the conditions foreseen by the manufacturer."

*Delete the second and third paragraphs and item d) in the fourth paragraph and renumber the last item.*

**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 292-2:1991/A1:1995.*

*Delete reference to EN 418:1992 and add the following:* "EN ISO 13850:2006, *Safety of machinery — Emergency stop — Principles for design (ISO 13850:2006)*" and replace "EN 418:1992" in 5.1.5, 3<sup>rd</sup> and 4<sup>th</sup> paragraphs, with "EN ISO 13850:2006".

*Replace "EN 847-1:1997" with "EN 847-1:2005" throughout the document.*

*Replace "EN 848-1:1997" with "EN 848-1:2007" throughout the document.*

*Replace "EN 859:1997" with "EN 859:2007" throughout the document.*

*Replace "EN 860:1997" with "EN 860:2007" throughout the document.*

Replace "EN 861:1997" with "EN 861:2007" throughout the document.

Replace "prEN 1870-1:1995" with "EN 1870-1:2007" throughout the document.

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

Delete EN 60227-1 and add "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 "prEN 60227-1" with "HD 21.1 S4:2002" throughout the document.

Replace prEN 60245-1 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 "prEN 60245-1" with "HD 22.1 S4:2002" throughout the document.

Replace EN 60439-1 prA 11:1995 with "EN 60439-1:1999, Low-voltage switchgear and controlgear assemblies — Part 1: Type-tested and partially type-tested assemblies (IEC 60439-1:1999)" and replace "EN 60439-1/prA 11:1995" with "EN 60439-1:1999" throughout the text.

Replace "EN 60497-4-1:1992" with "EN 60497-4-1:2001" throughout the document and add in the title "(IEC 60497-4-1:2000)".

Replace "EN 60497-5-1:1991" with "EN 60497-5-1:2004" throughout the document and add in the title "(IEC 60497-5-1:2003)".

Replace "EN 61029-1:1995" with "EN 61029-1:2000" throughout the document and replace in the title "(IEC 1029-1:1990, modified)" with "(IEC 61029-1:1990, modified)".

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 940:1997/prA1:2009 (E)**

EN 50370-2:2003, *Electromagnetic compatibility (EMC) — Product family standard for machine-tools — Part 2: Immunity*,

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

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 3.1, Definitions**

*Definition 3.1.12, replace the term with "displaceable machine".*

**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 2 in accordance with Annex A of EN 1050:1996.

**Table 2 — 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	5.2.6, 5.2.7, 5.5
	b) relative location;			5.2.6, 5.2.7, 5.2.9
	d) mass and velocity (kinetic energy of elements in controlled or uncontrolled motion);			5.2.6
	e) mechanical strength.			5.2.2
	- accumulation of energy inside the machinery:			
	g) liquids and gases under pressure;	4.2	4.10, 5.5.4	5.7, 5.8
1.1	Crushing hazard	4.2.1		5.2.1
1.2	Shearing hazard			5.2.1



1.3	Cutting or severing hazard			5.2.2, 5.2.3, 5.2.4, 5.2.5, 5.2.6, 5.2.7, 5.2.8
1.4	Entanglement hazard			5.2.7
1.5	Drawing-in or trapping hazard			5.2.7, 5.2.8
1.6	Impact hazard			5.2.5
1.7	Stabbing or puncture hazard			5.2.5
1.9	High pressure fluid injection or ejection hazard			5.7, 5.8, 5.17
2	<b>Electrical hazards</b> due to:			
2.1	Contact of persons with live parts (direct contact)	4.3	4.9, 5.5.4	5.4
2.2	Contact of persons with parts which have become live under faulty conditions (indirect contact)	4.3	4.9	5.4
3	Thermal hazards resulting in:			
3.1	burns and scalds, by a possible contact of persons by the radiation of heat sources	4.4		5.3.1
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
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, 6.3
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, 5.2.7
8.2	Hand-arm or foot-leg anatomy	4.9	4.8.3	5.2.6, 5.2.7
8.3	neglected use of personal protection equipment		4.8.7	5.2.8
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	5.1.2
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		5.2.3.3