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Träbearbetningsmaskiner – Maskinsäkerhet – Fräsmaskiner – Del 3: Numeriskt styrda borrmaskiner och överfräsmaskiner

Safety of woodworking machines – One side moulding machines with rotating tools – Part 3: Numerically controlled (NC) boring and routing machines

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Europastandarden EN 848-3:2007+A2:2009 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 848-3:2007+A2:2009.

Denna standard ersätter SS-EN 848-3:2007, utgåva 2.

The European Standard EN 848-3:2007+A2:2009 has the status of a Swedish Standard. This document contains the official English version of EN 848-3:2007+A2:2009.

This standard supersedes the Swedish Standard SS-EN 848-3:2007, edition 2.

Upplysningar om sakinnehållet i standarden lämnas av SIS, Swedish Standards Institute, telefon 08-555 520 00.
Standarder kan beställas hos SIS Förlag AB som även lämnar allmänna upplysningar om svensk och utländsk standard.

Information about the content of the standard is available from the Swedish Standards Institute (SIS), tel +46 8 555 520 00.
Standards may be ordered from SIS Förlag AB, who can also provide general information about Swedish and foreign standards.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 848-3:2007+A2

September 2009

ICS 79.120.10

Supersedes EN 848-3:2007

English Version

Safety of woodworking machines - One side moulding machines with rotating tools - Part 3: Numerically controlled (NC) boring and routing machines

Sécurité des machines pour le travail du bois - Machines à fraiser sur une face à outil rotatif - Partie 3: Perceuses et défonceuses à commande numérique

Sicherheit von Holzbearbeitungsmaschinen - Fräsmaschinen für einseitige Bearbeitung mit drehendem Werkzeug - Teil 3: NC-Bohr- und Fräsmaschinen

This European Standard was approved by CEN on 17 February 2007 and includes Amendment 1 approved by CEN on 30 July 2009 and Amendment 2 approved by CEN on 24 August 2009.

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 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 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.

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

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Foreword

This document (EN 848-3:2007+A2:2009) 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 March 2010, and conflicting national standards shall be withdrawn at the latest by March 2010.

This document includes Amendment 1, approved by CEN on 2009-07-30 and Amendment 2, approved by CEN on 2009-08-24.

This document supersedes ⟦A1⟩ EN 848-3:2007 ⟨A1⟧.

The start and finish of text introduced or altered by amendment is indicated in the text by tags ⟦A1⟩ ⟨A1⟧ and ⟦A2⟩ ⟨A2⟧.

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 ⟦A1⟩ Machinery Directives ⟨A1⟧.

⟦A1⟩ For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. ⟨A1⟧

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

The European Standards produced by CEN/TC 142 are particular to woodworking machines and compliment the relevant A and B standards on the subject of general safety (see introduction of EN ISO 12100-1:2003 for a description of A, B and C standards).

⟦A1⟩ EN 848 *Safety of woodworking machines — One side moulding machines with rotating tool* consists of the following parts:

Part 1: Single spindle vertical moulding machines

Part 2: Single spindle hand fed/integrated fed routing machines

Part 3: Numerically controlled (NC) boring and routing machines ⟨A1⟧

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: 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.

Introduction

This document has been prepared to be a harmonised standard to provide one means of conforming to the essential health and safety requirements of the Machinery Directive and associated EFTA Regulations.

This document is a type C standard as defined in EN ISO 12100-1:2003.

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 type C 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 numerically controlled (NC) boring machines and routing machines. It is also useful for designers.

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

Common requirements for tooling are given in EN 847-1:2005 and EN 847-2:2001.

1 Scope

This document [A1] specifies all [A1] significant hazards, hazardous situations and events as listed in Clause 4, which are relevant to NC boring machines, NC routing machines and NC combined boring/routing machines (as defined in 3.2.1) herein after referred to as "machines" designed to cut solid wood, chip board, fibreboard, plywood and also these materials where these are covered with plastic laminate or edgings when they are used as intended and under the conditions foreseen by the manufacturer.

This document also applies to machines fitted with:

a) additional equipment for sawing, sanding and edge banding;

b) fixed or movable workpiece support;

c) mechanical, pneumatic, hydraulic or vacuum workpiece clamping;

d) automatic tool change facilities.

This document does not deal with the specific hazards of edge banding equipment fitted to NC boring machines, NC routing machines and NC combined boring/routing machines.

This document is only applicable to NC boring machines, NC routing machines and NC combined boring/routing machines which are designed to use milling tools with a cutting circle diameter below 16 mm or milling tools or saw-blades conforming to EN 847-1:2005 and EN 847-2:2001 and boring tools or sanding wheels.

This document is not applicable to NC boring machines, NC routing machines and NC combined boring/routing machines which are designed to use grinding wheels.

This document is not applicable to single spindle hand fed/integrated fed routing machines.

NOTE Single spindle hand fed/integrated fed routing machines are dealt with in EN 848-2:2007.

This document does not deal with the specific hazards of ejection through curtains on machines with feeding openings of which the distance between the workpiece support and the lower part of the partial enclosure in the direction of the feed exceeds 400 mm.

This document is not applicable to NC boring machines, NC routing machines and NC combined boring/routing machines which are manufactured before the date of its publication as EN.

2 Normative references

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.

[A1] *deleted text* [A1]

EN 847-1:2005, *Tools for woodworking — Safety requirements — Part 1: Milling tools, circular saw blades*

EN 847-2:2001, *Tools for woodworking — Safety requirements — Part 2: Requirements for the shank of shank mounted milling tools*

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 982:1996, *Safety of machinery — Safety requirements for fluid power systems and their components — Hydraulics*

EN 983:1996, *Safety of machinery — Safety requirements for fluid power systems and their components — Pneumatics*

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 1088:1995, *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection*

EN 1760-1:1997, *Safety of machinery — Pressure sensitive protective devices — Part 1: General principles for the design and testing of pressure sensitive mats and pressure sensitive floors*

EN 1760-3:2004, *Safety of machinery — Pressure sensitive protective devices — Part 3: General principles for the design and testing of pressure sensing bumpers, plates, wires and similar devices*

EN 1837:1999, *Safety of machinery — Integral lighting of machines*

EN 50178:1997, *Electronic equipment for use in power installations*

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*

EN 60204-1:2006, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements (IEC 60204-1:2005, modified)*

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

EN 60529:1991, *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)*

〔A1〉 EN 60825-1:2007 〈A1〕, *Safety of laser products — Part 1: Equipment classification, requirements and user's guide* 〔A1〉 *(IEC 60825-1:2007)* 〈A1〕

EN 61496-1:2004, *Safety of machinery — Electro-sensitive protective equipment — Part 1: General requirements and tests (IEC 61496-1:2004, modified)*