Puidutöötlemismasinate ohutus. Statsionaarsete seadmetega hakise- ja tolmueemaldussüsteemid. Ohutu kasutamine ja ohutusnõuded KONSOLIDEERITUD TEKST

Safety of woodworking machines - Chip and dust extraction systems with fixed installation - Safety related performances and safety requirements CONSOLIDATED TEXT

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 12779:2005+A1:2009 sisaldab Euroopa standardi EN 12779:2004+A1:2009 ingliskeelset teksti.	This Estonian standard EVS-EN 12779:2005+A1:2009 consists of the English text of the European standard EN 12779:2004+A1:2009.
Standard on kinnitatud Eesti Standardikeskuse 30.10.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 30.10.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 26.08.2009.	Date of Availability of the European standard text 26.08.2009.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

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EUROPEAN STANDARD

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English Version

Safety of woodworking machines - Chip and dust extraction systems with fixed installation - Safety related performances and safety requirements

Sécurité des machines pour le travail du bois - Installations fixes d'extraction de copeaux et de poussières - Performances relatives à la sécurité et prescriptions de sécurité

Sicherheit von Holzbearbeitungsmaschinen - Ortsfeste Absauganlagen für Holzstaub und Späne - Sicherheitstechnische Anforderungen und Leistungen

This European Standard was approved by CEN on 20 October 2004 and includes Amendment 1 approved by CEN on 16 July 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.

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

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Contents

Foreword

This document (EN 12779:2004+A1:2009) has been prepared by Technical Committee CEN/TC 142 “Woodworking machines - Safety”, the secretariat of which is held by BSI.

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 February 2010 and conflicting national standards shall be withdrawn at the latest by February 2010.

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 includes Amendment 1, approved by CEN on 2009-07-16.

This document supersedes EN 12779:2004.

The start and finish of text introduced or altered by amendment is indicated in the text by tags [A1] [A1].

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 [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]

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).

This standard for Chip and dust extraction systems with fixed installation will be followed by a separate standard for Semi-stationary chip and dust extraction machines.

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 standard has been prepared to be a harmonized 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 in accordance with the provisions of this type C standard.

The requirements of this document are directed to manufacturers and their authorised representatives of chip and dust extraction systems. It is also useful for designers.

This document also includes information, which can be provided by the manufacturer to the user.

1 Scope

This document sets out the safety related performance requirements and specifies the methods for elimination of hazards or the measures that shall be taken to minimise hazards, which cannot be eliminated, on chip and dust extraction systems with fixed installation as defined in 3.1.1 and 3.1.2, for the purpose of this standard, hereinafter referred to as extraction system, connected to woodworking machines, designed to process solid wood, chipboard, fibreboard, plywood and also these materials where these are covered with plastic laminate or edgings. The extraction and conveying system operates pneumatically by vacuum and/or pressure between ± 0,3 bar.

This standard does not:

a) apply to fixed installations with an air flow capacity below 6 000 m^3h^{-1} installed indoors;

b) apply to moveable units with an air flow capacity below 6 000 m^3h^{-1};

c) apply to extraction equipment (e.g. extraction hoods, ducts) within a woodworking machine i.e. up to and including the outlet to which the extraction system is coupled;

d) apply to extraction systems connected to machines processing non-wood materials, such as plastic, plastic laminates, metals, glass or stone;

e) deal with the hazards from contact with or inhalation of dusts from wood coated with lacquer, plastic, aluminium and material with high additive contents or similar;

f) deal with shop fresh air supply;

g) apply to chip and dust extraction systems designed for K_{st} values above 200 bar ms^{-1};

h) apply to the silo discharge system;

i) cover the hazards related to Electromagnetic Compatibility (EMC) as required by the EMC Directive 89/336/EEC dated 3-5-89.

This document deals with the interaction with the silo discharge system if any.

This document covers the hazards relevant to these machines as stated in Clause 4 document

Directive 94/9/EC concerning equipment and protective systems intended for use in potentially explosive atmospheres can be applicable to the type of machine or equipment covered by this document.

The present standard is not intended to provide means of complying with the Essential Health and Safety Requirements (EHSR) of Directive 94/9/EC.

〚A1〉 This European Standard is not applicable to machines which are manufactured before the date of its publication as EN. 〈A1〛

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]

[A1] 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* [A1]

EN 953:1997, *Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards*

[A1] *deleted text* [A1]

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*

[A1] 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* [A1]

[A1] EN 1127-1:2007 [A1], *Explosive atmospheres — Explosion prevention and protection — Part 1: Basic concepts and methodology*

EN 1366-1:1999, *Fire resistance tests on service installations — Part 1: Ducts*

EN 1366-2:1999, *Fire resistance tests for service installations — Part 2: Fire dampers*

EN 13284-1:2001, *Stationary source emissions — Determination of low range mass concentration of dust — Part 1: Manual gravimetric method*

[A1] 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* ⟨A1⟩

⟨A1⟩ EN 60204-1:2006 ⟨A1⟩, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements* ⟨A1⟩ *(IEC 60204-1:2005, modified)* ⟨A1⟩

⟨A1⟩ EN 60439-1:2008, *Low-voltage switchgear and controlgear assemblies — Part 1: Type-tested and partially type-tested assemblies (IEC 60439-1:2007)* ⟨A1⟩

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

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)*

EN 60947-5-1:2004, *Low-voltage switchgear and controlgear — Part 5-1: Control circuit devices and switching elements — Electromechanical control circuit devices (IEC 60947-5-1:2003)*

⟨A1⟩ EN 61310-1:2008, *Safety of machinery — Indication, marking and actuation — Part 1: Requirements for visual, auditory and tactile signals (IEC 61310-1:2007)* ⟨A1⟩

EN ISO 11202:1995, *Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at a work station and at other specified positions — Survey method in situ (ISO 11202:1995)*

EN ISO 11688-1:1998, *Acoustics — Recommended practice for the design of low-noise machinery and equipment — Part 1: Planning (ISO/TR 11688-1:1995)*

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* ⟨A1⟩ *deleted text* ⟨A1⟩ *(ISO 12100-2:2003)*

⟨A1⟩ EN ISO 13849-1:2008, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design (ISO 13849-1:2006)* ⟨A1⟩

⟨A1⟩ EN ISO 13850:2008, *Safety of machinery — Emergency stop — Principles for design (ISO 13850:2006)* ⟨A1⟩

⟨A1⟩ EN ISO 13857:2008, *Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2008)* ⟨A1⟩

EN ISO 14122-2:2001, *Safety of machinery — ⟨A1⟩ Permanent means of access ⟨A1⟩ to machinery — Part 2: Working platforms and ⟨A1⟩ walkways ⟨A1⟩ (ISO 14122-2:2001)*

EN ISO 14122-3:2001, *Safety of machinery — Permanent means of access to machinery — Part 3: Stairs, stepladders and guard rails (ISO 14122-3:2001)*

EN ISO 14122-4:2004, *Safety of machinery — Permanent means of access to machinery — Part 4: Fixed ladders (ISO 14122-4:2004)*

ISO 7000:2004, *Graphical symbols for use on equipment — Index and synopsis*

ISO 10816-1:1995, *Mechanical vibration — Evaluation of machine vibration by measurements on non-rotating parts — Part 1: General guidelines*

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*