# Masinad ja jaamad lehtklaasi valmistamiseks ja töötlemiseks. Ohutusnõuded. Osa 3: Lõikamismasinad KONSOLIDEERITUD TEKST

Machines and plants for the manufacture, treatment and processing of flat glass - Safety requirements - Part 3: Cutting machines CONSOLIDATED TEXT

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

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|---|---|
| Käesolev Eesti standard EVS-EN 13035-3:2003+A1:2009 sisaldab Euroopa standardi EN 13035-3:2003+A1:2009 ingliskeelset teksti. | This Estonian standard EVS-EN 13035-3:2003+A1:2009 consists of the English text of the European standard EN 13035-3:2003+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 19.08.2009. | Date of Availability of the European standard text 19.08.2009. |
| Standard on kättesaadav Eesti standardiorganisatsioonist. | The standard is available from Estonian standardisation organisation. |



**ICS** 81.100

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# EN 13035-3:2003+A1

August 2009

ICS 81.100

Supersedes EN 13035-3:2003

English Version

# Machines and plants for the manufacture, treatment and processing of flat glass - Safety requirements - Part 3: Cutting machines

Machines et installations pour la production, le façonnage et la transformation du verre plat - Exigences de sécurité - Partie 3: Machines à découper

Maschinen und Anlagen für die Herstellung, Be- und Verarbeitung von Flachglas - Sicherheitsanforderungen - Teil 3: Schneidmaschinen

This European Standard was approved by CEN on 23 May 2003 and includes Amendment 1 approved by CEN on 23 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
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EUROPÄISCHES KOMITEE FÜR NORMUNG

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Ref. No. EN 13035-3:2003+A1:2009: E

# Contents

## Foreword

This document (EN 13035-3:2003+A1:2009) has been prepared by Technical Committee CEN/TC 151 “Construction equipment and building material machines – Safety“, the secretariat of which is held by DIN.

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 2009-07-23.

This document supersedes EN 13035-3:2003.

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 EC Directive(s).

[A1] For relationship with EU Directives, see informative Annexes ZA and ZB, which are integral parts of this document. ⟨A1⟩

[A1] Annexes A to G and K are normative. Annexes H, I and J are informative. ⟨A1⟩

This document is one of a series concerning machinery for the treatment and processing of flat glass.

This document includes a Bibliography.

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.

# 0 Introduction

This document is a type-C standard as stated in [A1] EN ISO 12100-1 [A1].

The machinery concerned and the extent to which hazards, hazardous situations and events are 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 the other standards for machines that have been designed and built according to the provisions of this type-C standard.

## 1 Scope

**1.1** This standard contains the requirements for safety for the design and installation of machines with one movable bridge for cutting of flat glass, which operate by scoring of the glass placed on a horizontal support. This standard covers the transport of the glass on the machine.

**1.2** [A1] This European Standard deals with all significant hazards, hazardous situations and events relevant to flat glass cutting machines, when they are used as intended and under the conditions of misuse which are reasonably foreseeable by the manufacturer (see Clause 4). This standard specifies the appropriate technical measures to eliminate or reduce risks arising from the significant hazards during commissioning, operation and maintenance. [A1] Hazards from noise are not considered to be significant.

**1.3** This standard does not apply to flat glass cutting by abrasive cutting or by the use of high pressure liquid or lasers.

**1.4** This standard does not apply to loading and unloading of flat glass on to or from cutting machines and the breaking out (see [A1] EN 13035-5 [A1] and [A1] EN 13035-6 [A1]).

**1.5** This standard does not apply to conveyors (see EN 619) and fans as used as integral parts of the machinery. If there are specific risks that arise in connection with flat glass cutting machines, appropriate measures are specified.

**1.6** This standard does not apply to cutting of laminated glass (see [A1] EN 13035-7 [A1]).

**1.7** This standard does not apply to cutting while the glass is moving.

**1.8** This document is not applicable to machinery which is manufactured before the date of publication of this document by CEN.

## 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 294:1992, *Safety of machinery - Safety distances to prevent danger zones being reached by the upper limbs*

EN 349:1993, *Safety of machinery - Minimum gaps to avoid crushing of parts of the human body*

[A1] *deleted text* [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 999:1998, *Safety of machinery - The positioning of protective equipment in respect of approach speeds of parts of the human body*

EN 1037:1995, *Safety of machinery - Prevention of unexpected start-up*

[A1] *deleted text* [A1]

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

EN 61496-1:2004, *Safety of machinery — Electro-sensitive protective equipment — Part 1: General requirements and tests (IEC 61496-1:2004, modified)* [A1]

[A1] *deleted text* [A1]

[A1] EN ISO 3744:1995, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Engineering method in an essentially free field over a reflecting plane (ISO 3744:1994)*

EN ISO 3746:1995, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane (ISO 3746:1995)*

EN ISO 3747:2000, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Comparison method for use in situ (ISO 3747:2000)*

EN ISO 4871:1996, *Acoustics — Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996)*

EN ISO 11201:1995, *Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at a work station and at other specified positions — Engineering method in an essentially free field over a reflecting plane (ISO 11201:1995)*

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 11204:1995, *Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at a work station and at other specified positions — Method requiring environmental corrections (ISO 11204:1995)*

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, 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)*

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

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

CLC/TS 61496-2:2006, *Safety of machinery — Electro-sensitive protective equipment — Part 2: Particular requirements for equipment using active opto-electronic protective devices (AOPDs) (IEC 61496-2:2006)* [A1]