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**Stroji in obrati za proizvodnjo, obdelavo in predelavo ravnega stekla - Varnostne zahteve - 11. del: Vrtalni stroji**

Machines and plants for the manufacture, treatment and processing of flat glass - Safety requirements - Part 11: Drilling machines

Maschinen und Anlagen zur Herstellung, Be- und Verarbeitung von Flachglas - Sicherheitsanforderungen - Teil 11: Bohrmaschinen

Machines et installations pour la production, le façonnage et la transformation du verre plat - Exigences de sécurité - Partie 11 : Machines de perçage

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**Ta slovenski standard je istoveten z: EN 13035-11:2006**

**ICS:**

25.080.40	Vrtalniki	Drilling machines
81.100	Oprema za steklarsko in keramično industrijo	Equipment for the glass and ceramics industries

**SIST EN 13035-11:2007****en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 13035-11**

June 2006

ICS 81.100

English Version

**Machines and plants for the manufacture, treatment and  
processing of flat glass - Safety requirements - Part 11: Drilling  
machines**

Machines et installations pour la production, le façonnage  
et la transformation du verre plat - Exigences de sécurité -  
Partie 11 : Machines de perçage

Maschinen und Anlagen zur Herstellung, Be- und  
Verarbeitung von Flachglas - Sicherheitsanforderungen -  
Teil 11: Bohrmaschinen

This European Standard was approved by CEN on 24 May 2006.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, 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.

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This document (EN 13035-11:2006) 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 December 2006, and conflicting national standards shall be withdrawn at the latest by December 2006.

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 EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

It is one of a series concerning machinery for the treatment and processing of flat glass (see 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, 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.

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## Introduction

This European Standard is a type C standard as stated in EN ISO 12100-1.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this European Standard.

When provisions of this type C standard are different from those 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.

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## 1 Scope

**1.1** This European Standard contains the requirements for stationary machines for the drilling of flat glass, using a powered rotating tool. Stationary machines are classified into:

- a) manual;
- b) semi-automatic;
- c) automatic single-head or multi-head;
- d) fully automatic.

**1.2** This European Standard deals with the significant hazards, hazardous situations and events relevant to drilling machines for flat glass when they are used as intended and under the conditions foreseeable by the manufacturer (see Clause 4). This European Standard specifies the appropriate technical measures to eliminate or reduce risks arising from the significant hazards during commissioning, the operation and maintenance.

**1.3** This European Standard does not address the safety requirements for conveyor belts, rollers (see EN 619) or other means of transporting the glass to and from the drilling machine (see e.g. EN 13035-5).

**1.4** This European Standard is not applicable to drilling machines which are manufactured before the date of publication of this European Standard by CEN.

## 2 Normative references

SIST EN 13035-11:2007

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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.

EN 294:1992, *Safety of machinery — Safety distance to prevent danger zones being reached by the upper limbs*

EN 418:1992, *Safety of machinery — Emergency stop equipment, functional aspects — Principles for design*

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

EN 954-1:1996, *Safety of machinery — Safety related parts of control systems — Part 1: General principles for design*

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

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*

EN 1050:1996, *Safety of machinery — Principles for risk assessment*

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

**EN 13035-11:2006 (E)**

EN 60204-1:1997, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements (IEC 60204-1:1997)*

EN 60825-1:1994, *Safety of laser products — Part 1: Equipment classification, requirements and user's guide (IEC 60825-1:1993)*

EN 61310-1:1995, *Safety of machinery — Indication, marking and actuation — Part 1: Requirements for visual, auditory and tactile signals (IEC 61310-1:1995)*

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 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)*

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**3 Terms and definitions**

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For the purposes of this document, the terms and definitions given in EN ISO 12100-1:2003 and the following apply.

**3.1****manual machine**

machine where the tool is applied to the workpiece by the direction of the operator

**3.2****semi-automatic machine**

machine where the workpiece is loaded and unloaded by the operator and some of the intermediate machining operations are under the control and guidance of the operator.

NOTE

During the machining operations, the operator does not come into contact with the workpiece

**3.3****automatic machine**

machine where the workpiece is loaded and unloaded by the operator, but all the intermediate machining operations are carried out without operator intervention

**3.4****fully automatic machine**

machine where the workpiece is presented to and removed from the tools automatically and all the intermediate machining operations are carried out without intervention of the operator



#### 4 List of significant hazards

This clause contains the significant hazards, hazardous situations and events, as far as they are dealt with in this European Standard, identified by risk assessment as significant for drilling machines and which require action to eliminate or reduce the risk.

Before using this European Standard, it is important to carry out a general risk assessment of the machine in question.

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