

## **Keraamikamasinad. Ohutus. Ülekandeplatvormid ja vagonetid**

Ceramic machines - Safety - Transfer platforms and cars

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 13367:2005 sisaldab Euroopa standardi EN 13367:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 22.06.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 13367:2005 consists of the English text of the European standard EN 13367:2005.</p> <p>This document is endorsed on 22.06.2005 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This document applies for the design, installation and commissioning of transfer platforms and cars and ancillary devices for the process related transport of ceramic material on rails.</p>	<p><b>Scope:</b></p> <p>This European Standard applies for the design, installation and commissioning of transfer platforms and cars and ancillary devices for the process related transport of ceramic material on rails.</p>
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**ICS** 81.100

**Võtmesõnad:** accident prevention, ceramics, definition, design, installations, machines

ICS 81.100

English version

## Ceramic machines - Safety - Transfer platforms and cars

Machines de la céramique - Sécurité - Chariots et wagons

Keramikmaschinen - Sicherheit - Schiebebühnen und  
Wagen

This European Standard was approved by CEN on 14 February 2005.

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.

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## Foreword

This European Standard (EN 13367:2005) 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 November 2005, and conflicting national standards shall be withdrawn at the latest by November 2005.

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).

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

This European Standard 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

## Introduction

This European Standard is a type C standard as stated in EN ISO 12100-1:2003.

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

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.

When compiling this European Standard it was assumed that:

- negotiations occur between the manufacturer and the user concerning especially the building components in relation to:
  - static;
  - sufficient free space (minimum gap) between vehicles and fixed parts of the building and between cars on adjoining rails;
  - laying of tracks;
  - local separation of the area of process related transport on rails and the machinery and equipment connected with it, e.g. for setting, dehacking, drying, burning, from other work stations and intended traffic routes;
- hazards of crushing between moving cars and fixed parts of machines for setting and loading or dehacking or unloading are covered by the preventive measures at these machines;
- the place of use is adequately lit;
- the existing ad hoc standards for components are applied;
- components without specific requirements are designed in accordance with usual engineering practice and calculation codes;
- components are kept in good repair and working order, so that the required characteristic remain despite wear;
- specifications have been met about interface with machinery and equipment connected with the process related transport with transfer platforms and cars such as kilns, dryers, machinery for setting, loading, dehacking, unloading;
- the design and working mode exclude an overload of cars.

## 1 Scope

**1.1** This European Standard applies for the design, installation and commissioning of transfer platforms and cars and ancillary devices for the process related transport of ceramic material on rails. The rails, which are considered to be horizontal and the movement of vehicles in equipment and machinery connected with the process related transport such as kilns, dryers, collector scaffolds, machinery for loading and unloading are also covered.

**1.2** This European Standard deals with all significant hazards, hazardous situations and events relevant to transfer platforms and cars, when they are used as intended and under the conditions foreseen by the manufacturer (see Clause 4). Noise is not a significant hazard. This document deals with the preventive measures to minimise these hazards which can arise during commissioning, the operation and maintenance.

**1.3** This European Standard is not applicable to:

**1.3.1** kilns and dryers (see EN 746-1:1997), machinery for setting and dehacking of heavy clay and refractory, products and machinery for loading and unloading of fine clay tiles;

**1.3.2** retrieval, packaging and storage of finished products;

**1.3.3** transport of cars with not rail mounted equipment e.g. with driverless trucks (see EN 1525:1997);

**1.3.4** transfer platforms and cars which are driven by human power.

**1.4** This European Standard is not applicable to transfer platforms and cars and ancillary devices which are manufactured before the date of publication of this European Standard 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.

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

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

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

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

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

EN 1760-2:2001, *Safety of machinery — Pressure sensitive protective devices — Part 2: General principles for the design and testing of pressure sensitive edges and pressure sensitive bars*

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

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

prEN 61496-2:2004, *Safety of machinery — Electro-sensitive protective equipment — Part 2: Particular requirements for equipment using active opto-electronic protective devices (AOPDs) (IEC 61496-2:1997)*

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)*

### 3 Terms, definitions, symbols and abbreviated terms

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

#### 3.1

##### **cars**

rail mounted vehicles e.g. drying cars, kiln cars, finger cars, container cars, frame cars for accumulating (see Annex A (informative))

#### 3.2

##### **transfer platform**

rail mounted vehicle for the movement of cars transverse to direction of their tracks (see Annex A (informative))

NOTE The term vehicle comprises cars and transfer platforms.

#### 3.3

##### **ancillary devices**

equipment which is an essential part of a system of transfer platforms and cars such as pushing or pulling devices for cars, turntables, limit switches and their supports, brakes for cars without own drive

#### 3.4

##### **pushing or pulling devices**

means for power driven movement of cars without own drive by applying the moving force from outside e.g. by guided trolleys with catches. The drive is realised e.g. by ropes of motor driven winches, hydraulic cylinders, motor driven frictional wheels

#### 3.5

##### **turntables**

means to rotate cars around a vertical axis

#### 3.6

##### **process related transport**

movement of transfer platforms and cars in the course of different process operations of ceramic material such as drying, firing; accumulating is included

#### 3.7

##### **fixed parts**

objects able to produce high reaction force such as supporting pillars, cars on adjacent tracks

#### 3.8

##### **fixed low parts**

fixed parts, e.g. ancillary devices, not higher than 250 mm above floor level

#### 3.9

##### **mechanical stop**

structural or special component generally at the end of tracks for a rigid halt of vehicles

#### 3.10

##### **shock absorbers**

mechanical equipment at the end of tracks, which allows damped stops by turning kinetic energy into heat