

**Kraana ohutus. Üldine ehitus. Osa 1: Üldpõhimõtted
ja nõuded KONSOLIDEERITUD TEKST**

Crane safety - General design - Part 1: General principles
and requirements CONSOLIDATED TEXT

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 13001-1:2005+A1:2009 sisaldab Euroopa standardi EN 13001-1:2004+A1:2009 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 29.05.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 15.04.2009.

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This Estonian standard EVS-EN 13001-1:2005+A1:2009 consists of the English text of the European standard EN 13001-1:2004+A1:2009.

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Võtmesõnad:

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English Version

Cranes - General design - Part 1: General principles and requirements

Appareils de levage à charge suspendue - Conception générale - Partie 1: Principes généraux et prescriptions

Krane - Konstruktion allgemein - Teil 1: Allgemeine Prinzipien und Anforderungen

This European Standard was approved by CEN on 2 March 2004 and includes Corrigendum 1 issued by CEN on 12 November 2008 and Amendment 1 approved by CEN on 7 March 2009.

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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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Foreword

This document (EN 13001-1:2004+A1:2009) has been prepared by Technical Committee CEN/TC 147 "Cranes - 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of an identical text or by endorsement, at the latest by October 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This European Standard was approved by CEN on 2 March 2004 and includes Corrigendum 1 issued by CEN on 12 November 2008 and Amendment 1 approved by CEN on 7 March 2009.

This document supersedes EN 13001-1:2004.

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

The modifications of the related CEN Corrigendum have been implemented at the appropriate places in the text and are indicated by the tags **AC** **AC**.

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 EU Directive(s).

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

Annex A is informative.

This European Standard is one Part of EN 13001. The other parts are as follows:

Part 1: General Principles and requirements

Part 2: Load actions

Part 3.1: Limit states and proof of competence of steel structures

Part 3.2: Limit states and proof of competence of rope reeving components

Part 3.3: Limit states and proof of competence of wheel/rail contacts

Part 3.4: Limit states and proof of competence of machinery

According to the CEN/CENELEC Internal Regulations, the national standards organisations 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 European Standard has been prepared to be a harmonized standard to provide one means for the mechanical design and theoretical verification of cranes to conform with the essential health and safety requirements of the Machinery Directive, as amended. This standard also establishes interfaces between the user (purchaser) and the designer, as well as between the designer and the component manufacturer, in order to form a basis for selecting cranes and components.

This European Standard is a type C standard as stated in EN 1070.

The machinery concerned and the extent to which hazards are covered are indicated in the scope of this 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.

1 Scope

This European Standard is to be used together with Part 2 and Part 3, and as such, they specify general conditions, requirements and methods to prevent mechanical hazards of cranes by design and theoretical verification. Part 3 is only at pre-drafting stage; the use of Parts 1 and 2 is not conditional to the publication of Part 3.

NOTE Specific requirements for particular types of crane are given in the appropriate European Standard for the particular crane type.

The following is a list of significant hazardous situations and hazardous events that could result in risks to persons during normal use and foreseeable misuse. Clause 4 of this standard is necessary to reduce or eliminate the risks associated with the following hazards:

- a) rigid body instability of the crane or its parts (tilting, shifting);
- b) exceeding the limits of strength (yield, ultimate, fatigue);
- c) elastic instability of the crane or its parts (buckling, bulging);
- d) exceeding temperature limits of material or components;
- e) exceeding the deformation limits.

This European Standard is applicable to cranes which are manufactured after the date of approval by CEN of this standard and serves as reference base for the European Standards for particular crane types.

2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any

of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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 and specifications (ISO 12100-2:2003).*

EN 1070:1998, *Safety of machinery — Terminology.*

EN 1990:2002, *Eurocode - Basis of structural design*

EN 13001-2, *Cranes — General design — Part 2: Load actions.*

ISO 4306-1:1990, *Cranes — Vocabulary — Part 1: General.*

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