

**Kraanad. Ohutus. Tornkraanad KONSOLIDEERITUD
TEKST**

Cranes - Safety - Tower cranes CONSOLIDATED TEXT

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 14439:2007+A2:2009 sisaldab Euroopa standardi EN 14439:2006+A2:2009 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 30.06.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 13.05.2009.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 14439:2007+A2:2009 consists of the English text of the European standard EN 14439:2006+A2:2009.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 30.06.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 13.05.2009.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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English Version

Cranes - Safety - Tower cranes

Appareils de levage à charge suspendue - Sécurité - Grues
à tour

Krane - Sicherheit - Turmdrehkrane

This European Standard was approved by CEN on 21 October 2006 and includes Amendment 1 approved by CEN on 14 April 2009 and Amendment 2 approved by CEN on 7 March 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.

CEN members are the national standards bodies of 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.









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

Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 14439:2006+A2:2009) 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 November 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This document includes Amendment 1, approved by CEN on 2009-04-14 and Amendment 2, approved by CEN on 2009-03-07.

This document supersedes EN 14439:2006.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1 and A2 A2.

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).

A2 For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. A2

To select a suitable set of crane standards for a given application see A1 Annex H A1.

NOTE Some of the standards listed are in preparation.

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 is a harmonised European Standard to provide one means for tower cranes to conform to the relevant Essential Health and Safety Requirements of the Machinery Directive 98/37/EC modified. Ⓐ

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

The machinery concerned and the extent to which hazards, hazardous situations and hazardous events are covered are 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 cranes that have been designed and built according to the provisions of this type C standard.

1 Scope

A1 This European Standard specifies safety requirements:

- for tower cranes and
- for climbing systems used with the tower cranes/masts of tower cranes for which they have been designed. They are classified as external or internal systems. **A1**.

This European Standard applies to tower cranes for construction work, which are either erected by parts or self erecting cranes.

This European Standard is not applicable to mobile cranes, mobile harbour cranes, crawler cranes, slewing jib cranes, bridge and gantry cranes, offshore cranes, floating cranes, loader cranes, hand operated cranes or railway cranes.

This European Standard deals with all significant hazards, hazardous situations and events relevant to tower cranes, when used as intended and under conditions foreseen by the manufacturer. This European Standard specifies the appropriate technical measures to eliminate or reduce risks arising from the significant hazards (see Clause 4).

The significant hazards covered by this European Standard are identified in Clause 4.

This European Standard does not cover hazards related to:

- the lifting of persons by the tower crane itself.

A1 *deleted text* **A1**

The requirements related to Electromagnetic compatibility (EMC), the specific hazards due to external influence on electrical equipment, potentially explosive atmospheres and ionising radiation are not covered by this European Standard.

A1 This European Standard covers hazards related to the lifting of persons using a climbing system. **A1**

This European Standard is not applicable to tower cranes **A1** and climbing systems **A1** which are manufactured before the date of publication by CEN of this European Standard.

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

EN 12077-2:1998, *Cranes safety — Requirements for health and safety — Part 2: Limiting and indicating devices*

EN 12644-1:2001, *Cranes — Information for use and testing — Part 1: Instructions*

EN 13135-1:2003, *Cranes — Safety — Design — Requirements for equipment — Part 1: Electrotechnical equipment*

EN 13135-2:2004, *Cranes — Equipment — Part 2: Non-electrotechnical equipment*

EN 13557:2003, *Cranes — Controls and control stations*

EN 13586:2004, *Cranes — Access*

EN 60204-32:1998 ^{A1}, *Safety of machinery — Electrical equipment of machines — Part 32: Requirements for hoisting machines (IEC 60204-32:1998)*

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 4871, *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 11203, *Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions from the sound power level (ISO 11203:1995)*

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 13857, *Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2008)* ^{A2}

ISO 3864 (all parts), *Graphical symbols — Safety colours and safety signs*

ISO 4306-1:2007 ^{A1}, *Cranes — Vocabulary — Part 1: General*

ISO 4306-3:2003, *Cranes — Vocabulary — Part 3: Tower cranes*

ISO 7752-3, *Cranes — Controls — Layout and characteristics — Part 3: Tower cranes*

ISO 8566-3, *Cranes — Cabins — Part 3: Tower cranes*

ISO 13200, *Cranes — Safety signs and hazard pictorials — General principles*

DIN 15018-1, *Cranes — Steel structures — Verification and analyses*

DIN 15018-2, *Cranes — Steel structures — Principles of design and construction*

DIN 15019-1, *Cranes — Stability for all cranes except non-rail mounted mobile cranes and except floating cranes*

FEM 1.001 (all parts), *Rules for the design of hoisting appliances*

FEM 1.003:1995, *Tower cranes — Graphical symbols*

FEM 1.005:2003, *Recommendation for the calculation of tower crane structures in out-of service conditions*