

Kraanad. Käsitsi kontrollitavad koormuse käsitlemise seadmed

Cranes - Manually controlled load manipulating
devices

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 14238:2004 sisaldab Euroopa standardi EN 14238:2004 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 26.10.2004 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 14238:2004 consists of the English text of the European standard EN 14238:2004.</p> <p>This document is endorsed on 26.10.2004 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>Käsitlusala: This European Standard specifies requirements for load manipulating devices (herein referred to as manipulators), powered by an energy other than human energy, to assist an operator in the handling of loads. This standard covers the manipulation machine and its load handling device(s), but not the supporting structure.</p>	<p>Scope: This European Standard specifies requirements for load manipulating devices (herein referred to as manipulators), powered by an energy other than human energy, to assist an operator in the handling of loads. This standard covers the manipulation machine and its load handling device(s), but not the supporting structure.</p>
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Võtmesõnad: control devices, cranes, direction (of movement), hoists, manipulator, manipulators, manual controls, materials handling, materials handling equipment, pedestrian-controlled systems, robots, safety measures, safety requirements, structures, summary, testing

English version

Cranes - Manually controlled load manipulating devices

Appareils de levage à charge suspendue - Manipulateurs
de charge à contrôle manuel

Krane - Handgeführte Manipulatoren

This European Standard was approved by CEN on 21 May 2004.

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 document (EN 14238:2004) 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 February 2005, and conflicting national standards shall be withdrawn at the latest by February 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 EU Directive(s).

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

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 document is a harmonized standard to provide one means for manually controlled load manipulating devices to conform to the essential health and safety requirements of the Machinery Directive, as amended.

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

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 document are different from those are stated in type A or B documents, the provisions of this type C document take precedence over the provision of the other documents, for machines that have been designed and built according to the provisions of this type C document.

1 Scope

This document specifies requirements for manually controlled load manipulating devices (herein referred to as manipulators), powered by an energy other than human energy, to assist an operator in the handling of loads.

This document does not cover:

- mechanically operated balancers that are based on springs or counterweights;
- manipulating robots;

This document does not cover hazards related to the lifting of persons.

This document does not establish the additional requirements for:

- operation in severe conditions (e.g. extreme environmental conditions such as : freezer applications, high temperatures, corrosive environment, strong magnetic fields);
- operation subject to special rules;
- handling of loads the nature of which could lead to dangerous situations (e.g. molten metal, acids/alkalies, radiating materials, specially brittle loads);
- hazards occurring during construction, transportation, decommissioning and disposal.

The significant hazards covered by this document are identified in Clause 4. For hazards that are not significant, EN ISO 12100-2 applies.

This document is applicable to manipulators which are manufactured after the date of approval by CEN of this 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 294, *Safety of machinery — Safety distances to prevent danger zones being reached by the upper limbs*

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

EN 811, *Safety of machinery — Safety distances to prevent danger zones being reached by the lower limbs*

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

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

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

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

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

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

EN 13001-1, *Cranes — General design — Part 1: General principles and requirements*

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

EN 13155:2003, *Cranes — Safety — Non-fixed load lifting attachments*

EN 13557, *Cranes — Controls and control stations*

prEN 14492-2:2002, *Cranes — Power driven winches and hoists — Part 2: Power driven hoists*

EN 60204-32, *Safety of machinery — Electrical equipment of machines — Part 32: Requirements for hoisting machines (ISO 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 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 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 11688-1, *Acoustics — Recommended practice for the design of low-noise machinery and equipment — Part 1: Planning (ISO/TR 11688-1:1998)*

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 and definitions

For the purposes of this document, the terms and definitions given in EN 1070:1998 and the following definitions apply.

3.1

operator

person using the manipulator

3.2

load holding device

device to pick up and hold the load.

An interchangeable load holding device is a device that can be changed by the operator

NOTE Load holding can be achieved for instance by: