TÕSTELAVADE OHUTUSNÕUDED. OSA 2: ROHKEM KUI KAHT HOONE LIIKUMATUT VASTUVÕTUPLATVORMI TEENINDAVAD TÕSTELAVAD KAUBA TÕSTMISEKS VERTIKAALSE LIIKUMISKIIRUSEGA KUNI 0,15 M/S

Safety requirements for lifting tables - Part 2: Lifting tables serving more than 2 fixed landings of a building, for lifting goods with a vertical travel speed not exceeding 0,15 m/s

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 1570-2:2016 sisaldab Euroopa standardi EN 1570-2:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 1570-2:2016 consists of the English text of the European standard EN 1570-2:2016.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 16.11.2016.	Date of Availability of the European standard is 16.11.2016.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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English Version

Safety requirements for lifting tables - Part 2: Lifting tables serving more than 2 fixed landings of a building, for lifting goods with a vertical travel speed not exceeding 0,15 m/s

Prescriptions de sécurité des tables élévatrices - Partie 2 : Tables élévatrices desservant plus de deux paliers fixes d'un bâtiment utilisées pour transporter des marchandises et dont la vitesse ne dépasse pas 0,15 m/s

Sicherheitsanforderungen an Hubtische - Teil 2: Hubtische zum Heben von Gütern, die mehr als 2 Haltestellen eines Gebäudes anfahren und deren Hubgeschwindigkeit 0,15 m/s nicht überschreitet

This European Standard was approved by CEN on 27 August 2016.

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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-CENELEC Management Centre has the same status as the official versions.

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Contents

Page

European foreword

This document (EN 1570-2:2016) has been prepared by Technical Committee CEN/TC 10 “Lilts, escalators and moving walks”, the secretariat of which is held by AFNOR.

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 May 2017, and conflicting national standards shall be withdrawn at the latest by May 2017.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports the essential requirements of 2006/42/EU.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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

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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This European Standard document was drafted as a design guidance manual to provide a means of achieving conformance to the essential safety requirements stipulated under Machinery Directive 2006/42/EC.

The machines concerned and the extent to which hazards, hazardous situations and hazardous incidents are covered are indicated in the scope of this European Standard. In addition, the machines should be designed according to the principles of EN ISO 12100 for relevant but non significant hazards, which are not dealt with in this standard.

As lifting tables are used in a wide range of applications, it is equally necessary to perform individual risk assessments in accordance with EN ISO 12100 for the actual operating conditions.

Products sold indirectly to end-users should be built to cover all the risks related to the use and all conditions foreseeable by the manufacturer, as described in the instruction manual.

Where the text gives an example of a safety measure for the purposes of greater clarity, this should not be considered as the only possible solution. Any other solution leading to the same risk reduction is permissible if an equivalent or increased level of safety is achieved.

While drafting this European Standard document, it was assumed that:

- the lifting tables are only operated by persons trained in using the equipment in accordance with the manufacturer's instructions, and that the working area is adequately lit;
- the lifting tables are installed on hard-standing, even, appropriately prepared surfaces.
- where there are special requirements on low noise levels, such as for hospital applications and theatres etc., the customer should specify these requirements and the manufacturer should then take all appropriate measures.

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

1.1 This European Standard specifies the safety requirements applicable to lifting tables presenting the following characteristics:

— serving more than two fixed landings of a construction;

— able to pass landings;

— designed exclusively for lifting or lowering goods and not persons;

— only accessible to persons during the loading/unloading phases;

— with a travel speed of no more than 0,15 m/s;

— permanently installed.

1.2 This European Standard deals with all significant hazards pertinent, with the exception of noise, to lifting tables when used as intended and under the conditions foreseen by the manufacturer (see Clause 4). This European Standard specifies the appropriate technical measures for eliminating and reducing the risks arising from the significant hazards.

1.3 This European Standard does not apply to the following equipment:

— permanently installed lifting tables, serving specific levels of a construction, with a vertical travel speed exceeding 0,15 m/s (EN 81-31);

— lifting tables serving not more than two fixed landings of a construction (EN 1570-1);

— lifting tables, serving more than 2 fixed landings of a construction for lifting operators, with a vertical travel speed not exceeding 0,15 m/s;

— lifting tables carrying operators and installed in enclosures with a vertical travel speed not exceeding 0,15 m/s;

— lifting tables used on ships;

— lifting tables designed for artists and stage set features during artistic performances;

— lifting tables driven by pusher chains.

1.4 This European Standard does not establish the additional requirements for:

— electromagnetic compatibility;

— operation in severe conditions (e.g. extreme climates, freezer applications, strong magnetic fields);

— operation subject to special rules (e.g. potentially explosive atmospheres, mines);

— handling of loads, the nature of which could lead to dangerous situations (e.g. molten metal, acids, radiating materials, particularly brittle loads, loose loads (gravel, tubes));

— hazards occurring during construction, transportation and disposal;

— equipment installed on the load platform or the replacing or maintaining of it;

— integration into broader systems or other machines, etc.;

— cable-less controls;

— lifting tables where the hydraulic pressure is derived directly from gas pressure;

— lifting tables powered by internal combustion engines.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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+A1:2008, *Safety of machinery - Minimum gaps to avoid crushing of parts of the human body*

EN 13001 (all parts), *Cranes - General design*

EN 60204-1:2006[1], *Safety of machinery - Electrical equipment of machines - Part 1: General requirements (IEC 60224-1:2005, modified)*

EN 60204-32:2008, *Safety of machinery - Electrical equipment of machines - Part 32: Requirements for hoisting machines (IEC 60204-32:2008)*

EN 60529:1991[2], *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)*

EN 60947-5-1:2004,[3] *Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices (IEC 60947-5-1:2003)*

EN 60947-5-3:2013, *Low-voltage switchgear and controlgear - Part 5-3: Control circuit devices and switching elements - Requirements for proximity devices with defined behaviour under fault conditions (PDDB) (IEC 60947-5-3:2013)*

EN 61310-2:2008, *Safety of machinery - Indication, marking and actuation - Part 2: Requirements for marking (IEC 61310:2007)*

EN 61496-1:2013, *Safety of machinery - Electro-sensitive protective equipment - Part 1: General requirements and tests (IEC 61496-1:2012)*

EN 61496-2:2013, *Safety of machinery - Electro-sensitive protective equipment - Part 2: Particular requirements for equipment using active opto-electronic protective devices (AOPDs) (IEC 61496-2:2013)*

EN ISO 4413:2010, *Hydraulic fluid power - General rules and safety requirements for systems and their components (ISO 4413:2010)*

EN ISO 12100:2010, *Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)*

[1] As impacted by EN 60204-1:2006/A1:2009.

[2] As impacted by EN 60529:1991/A1:2000 and EN 60529:1991/A2:2013

[3] As impacted by EN 60947-5-1:2004/A1:2009

EN ISO 13849-1:2015, *Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design (ISO 13849-1:2015)*

EN ISO 13850:2015, *Safety of machinery - Emergency stop function - Principles for design (ISO 13850:2015)*

EN ISO 13857:2008, *Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2008)*

EN ISO 14119:2013, *Safety of machinery - Interlocking devices associated with guards - Principles for design and selection (ISO 14119:2013)*

EN ISO 14122-3:2001, *Safety of machinery - Permanent means of access to machinery - Part 3: Stairs, stepladders and guard-rails (ISO 14122-3:2001)*

ISO 606:2015, *Short-pitch transmission precision roller and bush chains, attachments and associated chain sprockets*

ISO 4347:2015, *Leaf chains, clevises and sheaves — Dimensions, measuring forces, tensile strengths and dynamic strengths*

3 Terms and definitions

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

3.1
lifting table
load-lifting device with a load-supporting platform rigidly guided throughout its travel (e.g. a scissor lift)

3.2
fixed landing
permanent level of the construction for loading and unloading the lifting table

3.3
platform
part of the lifting table designed to accommodate the working load; fork arms are considered as a load platform for goods only

3.4
vertical travel
vertical distance between the lowest and highest fixed landing for which the lifting table is designed

3.5
rated load
load that the manufacturer has stated that the machine is capable of lifting/lowering when used in accordance with the instruction handbook

3.6
guard
part of the machine specifically used to provide protection by means of a physical barrier