

Tõsteplatvormid. Mastil liikuvad tööplatvormid
KONSOLIDEERITUD TEKST

Lifting platforms - Mast climbing work platforms
CONSOLIDATED TEXT

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1495:1999+A2:2009 sisaldab Euroopa standardi EN 1495:1997+A2:2009 ingliskeelset teksti.

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English Version

Lifting platforms - Mast climbing work platforms

Matériels de mise à niveau - Plates-formes de travail se
déplaçant le long de mât(s)

Hebebühnen - Mastgeführte Kletterbühnen

This European Standard was approved by CEN on 21 April 1997 and includes Corrigendum 1 issued by CEN on 11 December 1997, Amendment 1 approved by CEN on 1 September 2003 and Amendment 2 approved by CEN on 19 June 2009.

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Foreword

This document (EN 1495:1997+A2:2009) has been prepared by Technical Committee CEN/TC 98 "Lifting platforms", 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of an identical text or by endorsement, at the latest by January 2010, and conflicting national standards shall be withdrawn at the latest by January 2010.

This European Standard was approved by CEN on 21 April 1997 and includes Corrigendum 1 issued by CEN on 11 December 1997, Amendment 1 approved by CEN on 1 September 2003 and Amendment 2 approved by CEN on 19 June 2009.

This document supersedes EN 1495:1997.

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

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

This European Standard 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**

It is a type C- standard related to safety for Mast Climbing Work Platforms.



A2 *deleted text* **A2**

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 standard is one of a series of standards produced by CEN/TC 98 as part of the CEN/CENELEC programme of work to produce machinery safety standards. EN 414 (Safety of machinery – Rules for the drafting and presentation of safety standards) has been used as a guide in the preparation of this standard.

This standard has been prepared to be a harmonized standard to provide one means of conforming with the essential safety requirements of the Machinery Directive.

The extent to which hazards are covered is indicated in the scope of this standard. In addition, lifting equipment shall comply as appropriate with  EN ISO 12100  for hazards which are not covered by this standard.

1 Scope

1.1 This standard specifies the special safety requirements for Mast Climbing Work Platforms (MCWP) which are temporarily installed and are manually or power operated and which are designed to be used by one or more persons from which to carry out work. The vertical moving components (work platform) are also used to move those same persons and their equipment and materials to and from a single boarding point. These restrictions differentiate MCWPs from Builder's hoists.

The standard can also be used for permanently installed MCWP.

1.2 This standard is applicable to work platforms elevated by rack and pinion and guided by and moving along their supporting masts, where the masts may or may not require lateral restraint from separate supporting structures.

1.3 This standard is applicable to any combination of the following alternatives:

- One or more masts;
- Mast tied or untied;
- Mast of fixed or variable length;
- Masts vertical or inclined between 0° and 30° to the vertical;
- Masts which are standing or hanging;
- Movable or static base (chassis, or base frame);
- Manually or power operated elevation;
- Towed or self powered ground travel on site, excluding road traffic regulation requirements;
- Driven using electric, pneumatic or hydraulic motors.

1.4 This standard identifies the hazards arising during the various phases in the life of such equipment and describes methods for the elimination or reduction of these hazards and for the use of safe working practices.

1.5 This standard does not specify the requirements for dealing with the hazards involved in the manoeuvring, erection or dismantling, fixing or removing of any materials or equipment which are not part of the Mast Climbing Work Platform (MCWP). Neither does it deal with the handling of specific hazardous materials.

1.6 This standard does not specify the requirements for delivering persons and materials to fixed landing levels. Such equipment is referred to as lifts or hoists and are dealt with by other standards.

1.7 This standard does not include Mobile Elevating Work Platforms (MEWPs) according to **EN 280**, Suspended access equipment according to **EN 1808** or Lifting tables according to **EN 1570**.

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.

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EN 294:1992, *Safety of machinery — Safety distances to prevent danger zones being reached by the upper limbs*

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 614-1:1995, *Safety of machinery — Ergonomic design principles — Part 1: Terminology and general principles*

EN 953:1997, *Safety of Machinery — General requirements for the design and construction of guards (fixed, movable)*

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 components — Hydraulics*

EN 60065:1993, *Safety requirements for mains operated electronic and related apparatus for household and similar general use*

EN 60204-1:1992, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements*

EN 60529:1992, *Degrees of protection provided by enclosures (IP code)*

EN 60947-5-1:1991, *Low-voltage switchgear and controlgear — Part 5: Control circuit devices and switching elements — Section 1: Electromechanical control circuit devices and switching elements*

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)*

ISO 4301-1:1986, *Cranes and lifting appliances — Classification — Part 1: General*

ISO 4302:1989, *Cranes — Wind load assessment*

ISO 6336-1, *Calculation of load capacity of spur and helical gears — Part 1: Basic principles, introduction and general influence factors*

ISO 6336-2, *Calculation of load capacity of spur and helical gears — Part 2: Calculation of surface durability (pitting)*

ISO 6336-3, *Calculation of load capacity of spur and helical gears — Part 3: Calculation of tooth strength*

ISO 6336-5, *Calculation of load capacity of spur and helical gears — Part 5: Strength and quality of materials*

ISO 8686-1:1989, *Cranes — Design principles for loads and load combinations — Part 1: General*

3 Definitions

For the purposes of this standard the following definitions apply:

NOTE The terms which are used in this standard, with reference to the definitions below, are indicated in figures 1 and 2.

3.1

rated load

the loads for which the MCWP has been designed for in normal operation as stated in the load diagram

3.2

load diagram

a notice displayed on the work platform showing the permitted number of persons and the weight and distribution of materials for the particular configuration

3.3

rated speed

the vertical or horizontal speed for which the MCWP has been designed

3.4

transfer

any horizontal movement of the MCWP from one position to another on the same working site

3.5

transfer condition

the configuration of the MCWP in which the MCWP is moved from one position to another on the same working site and any limitation on the weather and the load or persons on the MCWP

3.6

transport

any movement of the MCWP outside the boundaries of the working site

3.7

transport condition

the configuration of the MCWP in which the MCWP is moved outside the boundaries of the working site (for example road transport)

3.8

transfer and transport interlocks

any design features on the MCWP which prevent unsafe transfer or transportation

3.9

base frame

the part of the MCWP which provides support for the mast and elevating assembly