Mobile access and working towers made of prefabricated elements - Part 1: Materials, dimensions, design loads, safety and performance requirements

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NATIONAL FOREWORD

See Eesti standard EVS-EN 1004-1:2020 sisaldab Euroopa standardi EN 1004-1:2020 ingliskeelset teksti.	This Estonian standard EVS-EN 1004-1:2020 consists of the English text of the European standard EN 1004-1:2020.
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 18.11.2020.	Date of Availability of the European standard is 18.11.2020.
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

Mobile access and working towers made of prefabricated elements - Part 1: Materials, dimensions, design loads, safety and performance requirements

Échafaudages roulants en éléments préfabriqués - Partie 1 : Matériaux, dimensions, calculs de charge, exigences de performance et de sécurité

Fahrbare Arbeitsbühnen aus vorgefertigten Bauteilen - Werkstoffe, Maße, Lastannahmen und sicherheitstechnische Anforderungen

This European Standard was approved by CEN on 14 March 2020.

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

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

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European foreword

This document (EN 1004-1:2020) has been prepared by WG4 “Mobile access towers” under the direction of Technical Committee CEN/TC 53 “Temporary works equipment”, 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 May 2021, and conflicting national standards shall be withdrawn at the latest by November 2021.

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.

This document supersedes EN 1004:2004.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

The development of mobile access and working towers systems is from the following two roots:

— scaffold manufacturers placed prefabricated unanchored scaffolds on four legs and castors;

— ladder manufacturers began to construct mobile access towers with light-weight ladders using aluminium frames and castors.

Taking this into account, CEN/TC53 decided in 1980 to standardize the manufacture of mobile access and working towers in parallel with the European standardization of prefabricated service and working scaffolds EN 12810-2 and EN 12811-3.

For materials, this document refers only to valid documents. However, a large stock of equipment made of materials conforming to documents no longer valid is in use. This document does not cover this equipment.

Attention is drawn to the requirements of the European Council Directive 2009/104/EC (provisions concerning the use of work equipment provided for temporary work at a height).

The average height of people continues to increase and that consideration will have to be given in later revisions to altering vertical dimensions.

The wind load requirements of this standard (0,1 kN/m^2).

Consider the fact that mobile access towers are generally intended for shorter duration tasks and may be re-located or quickly dismantled. Attention is drawn to 3.1, Note 2 and to the requirements of EN 1298 regarding information relating to wind conditions.

Mobile access and working towers are not anchor points for personal fall arrest equipment unless they are specifically designed in accordance with relevant European standards by the manufacturer for that purpose.

1 Scope

This document applies to the design of mobile access and working towers made of prefabricated elements with dimensions which are fixed by the design and with a height up to 12 m (indoors) and up to 8 m (outdoors). This document applies to mobile access and working towers used as temporary work equipment.

This document:

— gives guidelines for the choice of the main dimensions and stabilizing methods,

— gives safety and performance requirements, and

— gives information on complete towers.

This product standard does not apply to scaffolds according to EN 12810-1 and EN 12811-1.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 131-2, *Ladders — Part 2: Requirements, testing, marking*

EN 1298, *Mobile access and working towers — Rules and guidelines for the preparation of an instruction manual*

EN 1991-1-4:2005, *Eurocode 1: Actions on structures — Part 1-4: General actions - Wind actions*[1)]

EN 1993-1-1, *Eurocode 3: Design of steel structures — Part 1-1: General rules and rules for buildings*

EN 1995-1-1, *Eurocode 5: Design of timber structures — Part 1-1: General — Common rules and rules for buildings*

EN 1999-1-1[2)], *Eurocode 9: Design of aluminium structures — Part 1-1: General structural rules*

EN 12810-2:2003, *Façade scaffolds made of prefabricated components — Part 2: Particular methods of structural design*

EN 12811-1, *Temporary works equipment — Part 1: Scaffolds — Performance requirements and general design*

EN 12811-2, *Temporary works equipment — Part 2: Information on materials*

EN 12811-3, *Temporary works equipment — Part 3: Load testing*

EN ISO 2081, *Metallic and other inorganic coatings — Electroplated coatings of zinc with supplementary treatments on iron or steel (ISO 2081)*

1) This document is impacted by the amendment EN 1991-1-4:2005/A1:2010.

2) This document is impacted by the amendments EN 1999-1-1:2007/A1:2009 and EN 1999-1-1:2007/A1:2013.