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Incorporating corrigendum November 2013



BSI Standards Publication

**Mobile elevating work
platforms — Design
calculations — Stability criteria
— Construction — Safety —
Examinations and tests**

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National foreword

This British Standard is the UK implementation of EN 280:2013+A1:2015. It supersedes BS EN 280:2013 which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to CEN text carry the number of the CEN amendment. For example, text altered by CEN amendment A1 is indicated by A1 A1.

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A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

Mobile elevating work platforms - Design calculations - Stability criteria - Construction - Safety - Examinations and tests

Plates-formes élévatrices mobiles de personnel - Calculs de conception - Critères de stabilité - Construction - Sécurité - Examens et essais

Fahrbare Hubarbeitsbühnen - Berechnung - Standsicherheit - Bau - Sicherheit - Prüfungen

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Foreword

This document (EN 280:2013+A1:2015) 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of an identical text or by endorsement, at the latest by February 2016, and conflicting national standards shall be withdrawn at the latest by February 2017.

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

This document includes Amendment 1 approved by CEN on 27 June 2015.

This document supersedes A1 EN 280:2013 A1.

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

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.

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

A1 *deleted text* A1

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, 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 standard is a type C standard as stated in EN ISO 12100:2010.

The machinery concerned and the extent to which hazards, hazardous situations and hazardous events are covered are indicated in the scope of this document.

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.

The object of this European Standard is to define rules for safeguarding persons and objects against the risk of accidents associated with the operation of Mobile Elevating Work Platforms (MEWPs).

- This European Standard does not repeat all the general technical rules applicable to every electrical, mechanical or structural component.
- The safety requirements of this European Standard have been drawn up on the basis that MEWPs are periodically maintained according to manufacturers' instructions, working conditions, frequency of use and national regulations.

It is also assumed that MEWPs are checked for function daily before start of work and are not put into operation unless all required control and safety devices are available and in working order.

If a MEWP is seldom used, the checks may be made before start of work.

Furthermore it is assumed that persons on the work platform in case of power supply failure are not incapacitated and can assist in the emergency lowering.

- As far as possible this European Standard sets out only the requirements that materials and equipment need to meet in the interest of safety, and it is assumed that persons operating MEWPs are adequately trained.
- Where for clarity an example of a safety measure is given in the text, this does not need to be considered as the only possible solution. Any other solution leading to the same risk reduction is permissible if an equivalent level of safety is achieved.
- As no satisfactory explanation could be found for the dynamic factors used for stability calculations in previous national standards, the results of the tests carried out by the former CEN/TC 98/WG 1 to determine a suitable factor and stability calculation method for MEWPs have been adopted. The test method is described in Annex B (informative) as a guide for manufacturers wishing to use higher or lower operating speeds and to take advantage of developments in control systems.

Similarly, to avoid the unexplained inconsistencies in coefficients of utilisation for wire ropes found in other standards for lifting devices, appropriate extracts of the widely accepted standard DIN 15020-1 have been taken into 5.5.2 and Annex C (normative) with a worked example in Annex D (informative).

1 Scope

1.1 This European Standard specifies safety requirements and measures for all types and sizes of Mobile Elevating Work Platform (MEWP, see 3.1) intended to move persons to working positions where they are carrying out work from the work platform (WP) with the intention that persons are getting on and off the work platform only at access positions at ground level or on the chassis.

NOTE Machines designed for the handling of goods which are equipped with work platforms as interchangeable equipment are regarded as MEWPs.

1.2 This European Standard is applicable to the structural design calculations and stability criteria, construction, safety examinations and tests before MEWPs are first put into service. It identifies the hazards arising from the use of MEWPs and describes methods for the elimination or reduction of these hazards.

It does not cover the hazards arising from:

- a) use in potentially explosive atmospheres;
- b) electromagnetic incompatibility;
- c) work from the platform on external live electric systems;
- d) use of compressed gases for load bearing components;
- e) getting on and off the work platform at changing levels;
- f) specific applications (e.g. railway, ships) covered by National or local regulations.

1.3 This European Standard does not apply to:

- a) machinery serving fixed landings (see e.g. EN 81-1 and EN 81-2, EN 12159);
- b) fire-fighting and fire rescue appliances (see e.g. EN 1777);
- c) unguided work cages suspended from lifting appliances (see e.g. EN 1808);
- d) elevating operator position on rail dependent storage and retrieval equipment (see EN 528);
- e) tail lifts (see EN 1756-1 and EN 1756-2);
- f) mast climbing work platforms (see EN 1495);
- g) fairground equipment;
- h) lifting tables (see EN 1570-1);
- i) aircraft ground support equipment (see e.g. EN 1915-1 and EN 1915-2);
- j) elevating operator positions on industrial trucks (see EN 1726-2).

1.4 Classification:

MEWPs are divided into two main groups:

- a) Group A: MEWPs where the vertical projection of the centre of the area of the platform in all platform configurations at the maximum chassis inclination specified by the manufacturer is always inside the tipping lines.