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Mobile elevating work platforms — Design, calculations, safety requirements and test methods

*Plates-formes élévatrices mobiles de personnel — Conception, calculs,
exigences de sécurité et méthodes d'essai*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 16368 was prepared by Technical Committee ISO/TC 214, *Elevating work platforms*.

This second edition cancels and replaces the first edition (ISO 16368:2003), which has been technically revised.

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Introduction

The object of this International Standard is to define rules for safeguarding persons and objects against the risk of accident associated with the operation of mobile elevating work platforms (MEWPs). MEWPs are assemblies of one or more sub-assemblies produced by one or more manufacturers. A MEWP is the product of activities that include design, production and testing, as well as the provision of information on the MEWP itself.

This International Standard does not repeat all the general technical rules applicable to every electrical, mechanical or structural component. Its safety requirements have been drawn up on the basis that MEWPs are periodically maintained according to given instructions, working conditions, frequency of use and national or other regulations. It is assumed that MEWPs are checked for function before start of work, whether used daily or seldom used, and are not put into operation unless all the required control and safety devices are available and in working order. Where, for clarity, an example of a safety measure is given in the text, it is not intended as the only possible solution. Any other solution leading to the same risk reduction is permissible if an equivalent level of safety is achieved.

Annex A explains the choice of Beaufort Scale 6 as the maximum wind speed.

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 TC 98/WG 1 of the European Committee for Standardization (CEN) to determine a suitable factor and stability calculation method for MEWPs have been adopted. That test method is described in Annex B as a guide for the responsible entity 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 utilization for wire ropes found in other standards for lifting devices, appropriate extracts from the widely accepted DIN 15020^[31] have been included both in the body of this International Standard and in Annex C, with a worked example given in Annex D.

Annex E gives kerb test calculations, Annex F provides information on the instruction handbook, and Annex G specifies additional requirements for cableless controls and control systems.

Annex H presents the list of significant hazards dealt with by this International Standard.