
**Mobile elevating work platforms —
Design, calculations, safety requirements
and test methods relative to special
features —**

**Part 2:
MEWPs with non-conductive (insulating)
components**

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

Partie 2: PEMP avec composants non conducteurs (isolants)



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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 16653-2 was prepared by Technical Committee ISO/TC 214, *Elevating work platforms*.

ISO 16653 consists of the following parts, under the general title *Mobile elevating work platforms — Design, calculations, safety requirements and test methods relative to special features*:

- *Part 1: MEWPs with retractable guardrail systems*
- *Part 2: MEWPs with non-conductive (insulating) components*

MEWPs for orchard operations are to form the subject of a future part 3.

Introduction

The object of ISO 16653 is to define rules for safeguarding persons and objects against the risk of accident associated with the operation of special-application mobile elevating work platforms (MEWPs).

The requirements of ISO 16653 are intended to supplement or modify those of ISO 16368. Unless specified otherwise within this part of ISO 16653, all the relevant provisions of ISO 16368 are applicable in addition to the provisions of this part of ISO 16653.

ISO 16653 does not repeat all the general technical rules applicable to every electrical, mechanical or structural component.

The safety requirements of this part of ISO 16653 have been drawn up on the basis that MEWPs are periodically maintained according to the manufacturer's instructions, working conditions, frequency of use and applicable regulations.

It is assumed that MEWPs will be checked for function daily before start of work and that they will not be 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.

Where, for clarity, an example of a safety measure is given in the text, this is not intended as the only possible solution. Any other solution leading to an equivalent level of safety is permissible.

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Mobile elevating work platforms — Design, calculations, safety requirements and test methods relative to special features —

Part 2: MEWPs with non-conductive (insulating) components

1 Scope

This part of ISO 16653 specifies the design, calculations, safety requirements and test methods for mobile elevating work platforms (MEWPs) with non-conductive (insulating) components. It is intended to be used in conjunction with ISO 16368.

It is applicable to all types and sizes of MEWPs with non-conductive (insulating) components, including dielectric components designed and tested to meet the specific electrical properties consistent with the manufacturer's identification plate. This equipment is intended to move persons, tools and equipment to working positions where they can carry out work from a work platform located above a non-conductive boom section.

This part of ISO 16653 covers structural design calculations and the application of stability criteria, construction, safety examinations and tests done before MEWPs with non-conductive (insulating) components are first put into service. It identifies the hazards arising from the use of MEWPs with non-conductive (insulating) components and describes methods for the elimination or reduction of these hazards.

The MEWPs covered are not intended to have any of their components make contact with live parts of electrical installations. The electrical properties of a MEWP's non-conducting (insulating) components can provide electrical protection in case of inadvertent contact above the non-conductive boom component at the platform end. If a MEWP is equipped with a chassis insulating system, it can provide electrical protection for ground personnel in case of inadvertent contact above that system.

This part of ISO 16653 is not applicable to MEWPs designed for live working (see IEC 61057).

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.

ISO 16368:—¹⁾, *Mobile elevating work platforms — Design, calculations, safety requirements and test methods*

ISO 18893:2004, *Mobile elevating work platforms — Safety principles, inspection, maintenance and operation*

IEC 61057, *Live working — Insulating aerial devices for mounting on a chassis*²⁾

1) To be published. (Revision of ISO 16368:2003)

2) To be published. (Revision of IEC 61057:1991)