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Mobile elevating work platforms — Safety principles, inspection, maintenance and operation

*Plates-formes élévatrices mobiles de personnel — Principes de
sécurité, inspection, entretien, mise en oeuvre et utilisation*

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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

This third edition cancels and replaces the second edition (ISO 18893:2014), which has been technically revised.

The main changes are as follows:

- the Scope was updated to clarify the purpose of the document and its applicability to both new MEWPs on the market and those currently in service;
- in [Clause 3](#), additional terms were added to support the clarifications on MEWP groups and types throughout the document;
- in [Clause 4](#), changes were made to the modification requirements (manufacturer modifications versus owner modifications);
- in [Clause 6](#), requirements were broadened for operator training to include topics such as authorization, supervisor training and operator retraining;
- the original Annex containing examples of misuse was deleted, and a new [Annex A](#) was added to show examples of each group and type MEWP.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document, as other documents on mobile elevating work platforms (MEWPs), is part of a program of work regarding standardization of terminology, ratings, general principles (technical performance requirements and risk assessment), safety requirements, test methods, maintenance, and operation for MEWPs used to raise (elevate) and position personnel (and related work tools and materials).

MEWPs are machines/devices which provide protection from falling when working at height.

The entities with responsibilities related to safe use of a MEWP are established by law in some countries. This document provides guidance in the identification of those responsible entities.

The responsibility for safe operation of a MEWP lies with employers, managers, supervisors, operators, and others using these machines/devices. This document provides requirements so that appropriate MEWPs are selected for use and positioned, used, maintained and examined for safe use.

The use of competent authorized persons and trained operators (see ISO 18878) is critical to the safe operation of a MEWP.

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Mobile elevating work platforms — Safety principles, inspection, maintenance and operation

1 Scope

This document applies to all mobile elevating work platforms (MEWPs) intended for moving a person(s) along with their necessary tools and materials at an elevated work location.

This document specifies the requirements for selection, inspection, training, maintenance, repair and safe operation of MEWPs to achieve the following objectives:

- a) eliminate or reduce accidents, personal injuries and property damage;
- b) establish criteria for selection, inspection, training, maintenance, repair and safe operation;
- c) help manufacturers, dealers, owners, users, operators, occupants and qualified persons to understand their responsibilities;
- d) establish a process for reviews to verify compliance with this document;
- e) provide a guide for governmental authorities desiring to formulate safety rules and regulations.

In this document, MEWP classifications comprise a MEWP group (platform location in reference to tipping line) with an associated MEWP type (reference to travelling).

This document is applicable to both new MEWPs put on the market and those MEWPs currently in service.

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.

ISO 18878, *Mobile elevating work platforms — Operator (driver) training*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1 anchorage

designated point of attachment utilized with a personal fall protection system

3.2 authorized person

person approved or assigned to perform a specific type of duty or duties at a specific location or locations at a work site

3.3

configuration

positions in which a *MEWP* (3.13), chassis, *extending structure* (3.5), or work platform can be placed within intended operating limits, including creating variable rated loads

3.4

delivery

transfer of custody, care, and control of a *MEWP* (3.13) from a person or entity to another person or entity

3.5

extending structure

structure that is connected to the chassis and supports the work platform and allows movement of the work platform to its required position

[SOURCE: ISO 16368:2024¹⁾, 3.8]

3.6

fall arrest system

personal fall protection system designed to arrest the fall of an *operator* (3.17) or *occupant(s)* (3.15)

[SOURCE: ISO 16368:2024, 3.9]

3.7

fall restraint system

personal fall protection system that restrains or prevents an *operator* (3.17) or *occupant(s)* (3.15) from reaching a fall hazard

[SOURCE: ISO 16368:2024, 3.10]

3.8

familiarization

provision of the necessary information to a *qualified person* (3.20) or trained *operator* (3.17) regarding the features, functions, devices, limitations, and operating characteristics, as defined by the *manufacturer* (3.12), in order to properly use a specific model of *MEWP* (3.13)

3.9

hazardous atmosphere

location that contains, or has the potential to contain, an explosive or flammable atmosphere

3.10

load-sensing system

system of monitoring the vertical load and vertical forces on the work platform

[SOURCE: ISO 16368:2024, 3.19]

3.11

maintenance

act of upkeep such as inspection, lubrication, refuelling, cleaning, adjustment, and scheduled parts replacement

3.12

manufacturer

person or entity that makes, builds, or produces a *MEWP* (3.13)

1) Under preparation. Stage at the time of publication: ISO/FDIS 16368:2024.

3.13

mobile elevating work platform MEWP

machine/device intended for moving a person(s), along with their necessary tools and material, to an elevated work location, consisting of at least a work platform with controls, an *extending structure* (3.5), and a chassis

[SOURCE: ISO 16368:2024, 3.22]

3.13.1

group A MEWP

MEWP (3.13) on which the vertical projection of the centre of the work platform area, in all work platform configurations (3.3) at the maximum chassis inclination specified by the *manufacturer* (3.12), is always inside the tipping lines

[SOURCE: ISO 16368:2024, 3.23]

3.13.2

group B MEWP

MEWP (3.13) that is not in group A

[SOURCE: ISO 16368:2024, 3.24]

3.13.3

type 1 MEWP

MEWP (3.13) for which travelling is only allowed when in the stowed position

[SOURCE: ISO 16368:2024, 3.25]

3.13.4

type 2 MEWP

MEWP (3.13) for which travelling with the work platform in the elevated travel position is controlled from a point on the chassis

Note 1 to entry: Type 2 and type 3 MEWPs can be combined.

[SOURCE: ISO 16368:2024, 3.26]

3.13.5

type 3 MEWP

MEWP (3.13) for which travelling with the work platform in the elevated travel position is controlled from a point on the work platform

Note 1 to entry: Type 2 and type 3 MEWPs can be combined.

[SOURCE: ISO 16368:2024, 3.27]

3.14

modification

change or addition to a *MEWP* (3.13) as originally manufactured which affects the *operation* (3.16), stability, safety factors, rated load, or safety of the MEWP

3.15

occupant

person in the *MEWP* (3.13) work platform other than the *operator* (3.17)

[SOURCE: ISO 16368:2024, 3.35, modified — “MEWP” was added before “work platform”.]

3.16

operation

performance of functions of a *MEWP* (3.13) within the scope of its specifications and in accordance with the *manufacturer's* (3.12) instructions, work rules and applicable governmental regulations

3.17

operator

person who controls the *operation* (3.16) of a *MEWP* (3.13)

3.18

operator's manual

manual provided by the *manufacturer* (3.12) and intended to be a part of the *MEWP* (3.13) which includes information to allow for safe *operation* (3.16) of the MEWP

3.19

owner

person or entity that has possession of a *MEWP* (3.13) by virtue of proof of purchase or legal possession of the MEWP

3.20

qualified person

person who, by possession of a recognized degree, certificate or professional standing, or by extensive knowledge, *training* (3.26) and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work or the project

3.21

repair

act of restoring to good condition that which has been broken, damaged or worn due to use, abuse or other reasons

3.22

retraining

required instruction based on the user's observations or evaluations to maintain a previously trained person's status as qualified for the task

3.23

risk assessment

process to identify potential hazards associated with a task and the work environment where the task is to be performed, and the development of methods to remove or control the risk to workers from identified hazards

3.24

safety-related bulletin

publication from the *manufacturer* (3.12) of a *MEWP* (3.13) that needs attention to ensure safe *operation* (3.16) of the MEWP

3.25

stabilising device

device or system used to stabilise a *MEWP* (3.13) by supporting and/or levelling the complete MEWP or the *extending structure* (3.5)

EXAMPLE Outrigger, jack, suspension-locking device, extending axle, torsion bar.

[SOURCE: ISO 16368:2024, 3.50]

3.26

training

instruction to enable the trainee to become a *qualified person* (3.20) regarding the tasks to be performed, including knowledge regarding potential hazards

3.27

transport

movement of the *MEWP* (3.13) outside the boundaries of the work site

3.28

travelling

movement of the chassis, except when the *MEWP* (3.13) is being transported

[SOURCE: ISO 16368:2024, 3.53]

3.29

user

person or entity that has care, control, and custody of the *MEWP* (3.13)

Note 1 to entry: The user can be more than one person or entity.

4 General requirements

4.1 Basic principles

4.1.1 The information in this document shall be supplemented by good job management, while applying sound principles of safe use planning, safe operation, training, inspection, maintenance, repair, and *MEWP* selection. All data available regarding the parameters of intended use and expected environment shall be considered. Decisions on the use and operation of the *MEWPs* shall always be made with due consideration for the fact that the machine will be carrying persons whose safety is dependent on those decisions as well as others in the operating vicinity.

4.1.2 The operation of any *MEWP* is subject to certain hazards that can be protected against only by the exercise of intelligence, care, and common sense and not by any device. It is essential to have persons who are medically and physically fit for the task selected to be trained and qualified in the intended use, safe operation, maintenance, and repair of this type of equipment.

4.1.3 It is an essential requirement that:

- a) the selection, positioning, operation, maintenance and inspections of a *MEWP* are properly planned, appropriately supervised by qualified persons and carried out in a safe manner;
- b) qualified person(s) evaluate the risks associated with the use of a *MEWP* and puts appropriate control measures and safe work procedures in place;
- c) all *MEWP* operators be trained in accordance with ISO 18878;
- d) all *MEWP* maintenance and repair work be performed by a qualified person in accordance with the manufacturer's recommendations, having regard to the environment and the severity of use.

NOTE National or local requirements can apply which can be more stringent.

4.2 Safe use planning

A safe use plan specific to *MEWPs* shall be developed by the user. It shall include, but not be limited to:

- a) performing a site risk assessment to:
 - 1) identify hazards;
 - 2) evaluate risks;
 - 3) develop control measures;
 - 4) identify safe work procedures;
 - 5) communicate with affected persons;
- b) selecting, provisioning and using of a suitable *MEWP* and work equipment associated with it;