

~~TC/WG1N~~

~~Date: 2024-02-08~~

~~TC/SC/WG~~ **ISO/FDIS 18893**

ISO/TC 214

Secretariat: ANSI

**iTeh Standards**  
**(<https://standards.itih.ai>)**  
**Document Preview**

ISO/FDIS 18893

<https://standards.itih.ai/catalog/standards/iso/b15fc80f-76ea-4f45-b976-d67619a02b3c/iso-fdis-18893>

Document type:

Document subtype:

Document stage:

Document language:



COPYRIGHT PROTECTED DOCUMENT

Date: 2024-06-26

## **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*

iTeh Standards

(<https://standards.itih.ai>)

**FDIS stage**

ISO/FDIS 18893

<https://standards.itih.ai/catalog/standards/iso/b15fc80f-76ea-4f45-b976-d67619a02b3c/iso-fdis-18893>

Document type:

Document subtype:

Document stage:

Document language:

© ISO 2024

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office

CP 401 • Ch. de Blandonnet 8 • CP 401

CH-1214 Vernier, Geneva, Switzerland

Tel.-Phone: + 41 22 749 01 11

Fax + 41 22 749 09 47

E-mail: [copyright@iso.org](mailto:copyright@iso.org)

Website: [www.iso.org](http://www.iso.org)~~www.iso.org~~

Published in Switzerland

iTeh Standards  
(<https://standards.iteh.ai>)  
Document Preview

ISO/FDIS 18893

<https://standards.iteh.ai/catalog/standards/iso/b15fc80f-76ea-4f45-b976-d67619a02b3c/iso-fdis-18893>

**Contents**—Page

Foreword.....	vi
Introduction.....	vii
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
4 General requirements.....	5
4.1 Basic principles.....	5
4.2 Safe use planning.....	6
4.3 Manual(s).....	7
4.3.1 Operator's manual(s).....	7
4.3.2 Parts and service manual(s).....	7
4.4 Record retention.....	7
4.5 Modifications.....	7
4.5.1 Manufacturer modifications.....	7
4.5.2 Owner modifications.....	7
5 Maintenance.....	8
5.1 Preventive maintenance.....	8
5.2 Maintenance inspections.....	8
5.2.1 General.....	8
5.2.2 Pre-delivery inspection.....	8
5.2.3 Pre-start inspection.....	8
5.2.4 Frequent inspection.....	9
5.2.5 Annual inspection.....	10
5.3 Maintenance personnel training.....	11
5.4 Maintenance and repair safety precautions.....	11
5.5 Replacement parts.....	11
5.6 Manufacturer's safety-related bulletins.....	12
6 Qualification and training.....	12
6.1 Authorization to operate.....	12
6.2 User conformance evaluations.....	12
6.3 Retraining.....	12
6.4 Assessment of personnel.....	12
6.5 Occupant knowledge.....	12
6.6 Supervisor training.....	13
6.7 Familiarization.....	13
6.8 Assistance to operators.....	13
7 Operation.....	14
7.1 General.....	14
7.2 Risk assessment.....	14
7.2.1 General.....	14
7.2.2 Stages of risk assessment planning.....	14
7.3 Rescue from height.....	15
7.3.1 General.....	15
7.3.2 Rescue plan.....	15
7.3.3 Rescue using another MEWP.....	15
7.4 Addressing system failure.....	16
7.5 Before operation.....	16
7.6 Worksite inspection.....	17

7.7	Understanding of hazardous locations .....	17
7.8	Specific requirements of operation.....	18
7.8.1	Weather considerations .....	18
7.8.2	Ground condition considerations .....	18
7.8.3	Transporting and travelling on public roads.....	19
7.8.4	Slope and grade .....	19
7.8.5	Deployment of stability enhancing means .....	19
7.8.6	Fall protection.....	19
7.8.7	Distribution of load .....	19
7.8.8	MEWP movement.....	19
7.8.9	Electrocution hazards .....	21
7.8.10	Footing for personnel.....	21
7.8.11	Precaution for other moving equipment.....	21
7.8.12	Reporting safety-related problems or malfunctions .....	21
7.8.13	Reporting potentially hazardous locations .....	22
7.8.14	Hazardous location operation.....	22
7.8.15	Entanglement .....	22
7.8.16	Load transfer .....	22
7.8.17	Work area .....	22
7.8.18	Fuelling .....	22
7.8.19	Battery charging.....	22
7.8.20	Improper MEWP stabilisation.....	22
7.8.21	Misuse as a crane or elevator .....	22
7.8.22	Use of MEWP for grounding .....	22
7.8.23	Climbing the extending structure .....	22
7.8.24	Unusual operating support conditions .....	23
7.8.25	Travelling.....	23
7.8.26	Stunt driving.....	23
7.8.27	Securing the MEWP .....	23
7.8.28	Interference with safety devices .....	23
7.8.29	Snagged MEWP.....	23
7.8.30	Vacating (or entering) a MEWP at height.....	23
7.8.31	Carrying materials larger than the work platform.....	24
7.8.32	Carrying materials outside the work platform .....	24
7.8.33	Rated manual forces and special forces .....	24
7.8.34	Protection against unauthorized use .....	24
7.8.35	Misuse as a jack.....	25
7.8.36	Moving overhead obstructions .....	25
7.8.37	Parking of MEWP.....	25
7.8.38	Transport.....	25
7.8.39	Ventilation.....	25
7.8.40	Allowable rated forces .....	25
Annex A (informative)	Examples of MEWP types and groups .....	26
A.1	Example of group A, type 1 MEWP .....	26
A.2	Example of group A, type 2 MEWP .....	26
A.3	Example of group A, type 3 MEWP .....	27
A.4	Examples of group B, type 1 MEWPs.....	28
A.5	Example of group B, type 2 MEWP .....	29
A.6	Examples of group B, type 3 MEWPs.....	30
Bibliography	.....	32

## 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](http://www.iso.org/directives)).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at [www.iso.org/patents](http://www.iso.org/patents). ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

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:

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

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](http://www.iso.org/members.html).

## Introduction

This document ~~is one of a series of standards for Mobile Elevating Work Platforms, as other documents on mobile elevating work platforms (MEWPs) as~~, 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 ~~elevating work platforms~~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.

# iTeh Standards (<https://standards.iteh.ai>) Document Preview

ISO/FDIS 18893

<https://standards.iteh.ai/catalog/standards/iso/b15fc80f-76ea-4f45-b976-d67619a02b3c/iso-fdis-18893>





# 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.

~~The purpose of this~~This document ~~is to specify~~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 ~~respective~~ 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 ~~are comprised of~~comprise a MEWP group (platform location in reference to tipping line) with an associated MEWP type (reference to travelling).

~~All provisions of the~~This document ~~apply~~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/FDIS 16368:2024, Mobile elevating work platforms — Design, calculations, safety requirements, and test methods~~

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**

~~all~~ positions in which a *MEWP* ~~(3.13(3.13))~~, chassis, *extending structure* ~~(3.5(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(3.13))~~ from a person or entity to another person or entity

### 3.5

#### **extending structure**

~~a~~ 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 ~~/FDIS~~-16368:2024,<sup>1)</sup> 3.8]

### 3.6

#### **fall arrest system**

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

[SOURCE: ISO ~~/FDIS~~-16368:2024, 3.9]

### 3.7

#### **fall restraint system**

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

[SOURCE: ISO ~~/FDIS~~-16368:2024, 3.10]

### 3.8

#### **familiarization**

provision of the necessary information to a *qualified person* ~~(3.20(3.20))~~ or trained *operator* ~~(3.17(3.17))~~ regarding the features, functions, devices, limitations, and operating characteristics, as defined by the *manufacturer* ~~(3.12(3.12))~~, in order to properly use a specific model of *MEWP* ~~(3.13(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 ~~/FDIS~~-16368:2024, 3.19]

---

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

### 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)~~

### 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 ~~FDIS~~ 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 ~~FDIS~~ 16368:2024, 3.23]

#### 3.13.2

##### **group B MEWP**

*MEWP* ~~(3.13)~~ that ~~are~~ is not in group A

[SOURCE: ISO ~~FDIS~~ 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 ~~FDIS~~ 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 ~~FDIS~~ 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-type~~ 3 MEWPs can be combined.

[SOURCE: ISO ~~FDIS~~ 16368:2024, 3.27]

**3.14**

**modification**

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

**3.15**

**occupant(s)**

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

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

**3.16**

**operation**

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

**3.17**

**operator**

person who controls the *operation* (3.16(3.16)) of a *MEWP* (3.13(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(3.13)) which includes information to allow for safe *operation* (3.16) of the *MEWP* (3.13)

**3.19**

**owner**

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

**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(3.14)) of a *MEWP* (3.13) that needs attention to ensure safe *operation* (3.16(3.16)) of the *MEWP*