BS ISO 21455:2020
Incorporating corrigendum July 2020

BSI Standards Publication

Mobile elevating work platforms — Operator's controls — Actuation, displacement, location and method of operation

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National foreword

This British Standard is the UK implementation of ISO 21455:2020.

The UK participation in its preparation was entrusted to Technical Committee MHE/12/1, Lifting Platforms - Mobile elevating work platforms.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Published by BSI Standards Limited 2020

ISBN 978 0 539 14700 1

ICS 53.020.99

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 April 2020.

Amendments/corrigenda issued since publication

Date	Text affected
31 July 2020	Implementation of ISO corrected text 09 July 2020: Table 3, width of joystick grip hand corrected

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INTERNATIONAL STANDARD

ISO 21455

First edition
2020-04

Corrected version
2020-07

Mobile elevating work platforms — Operator's controls — Actuation, displacement, location and method of operation

Plates-formes élévatrices mobiles de personnel — Commandes de l'opérateur — Actionnement, déplacements, dispositions et modes de fonctionnement

Reference number
ISO 21455:2020(E)

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Published in Switzerland

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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 documents 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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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.

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

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.

This corrected version of ISO 21455:2020 corrects the value for the width of joystick grip hand in Table 3.

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Introduction

This document has been developed to provide methods of operation and requirements for operator's controls on mobile elevating work platforms. These provisions have been derived from experience, current practice, human factors literature and existing standards.

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Mobile elevating work platforms — Operator's controls — Actuation, displacement, location and method of operation

1 Scope

This document specifies the performance requirements, location, marking and method of operation related to operator's controls on mobile elevating work platforms (hereafter referred to as MEWPs) and takes into account operator safety and ergonomics.

It applies to all controls used by an operator and includes provisions for finger, thumb, hand, and foot operated controls.

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 16368, *Mobile elevating work platforms — Design, calculations, safety requirements and test methods*

ISO 20381, *Mobile elevating work platforms — Symbols for operator controls and other displays*

ISO 7000, *Graphical symbols for use on equipment — Registered symbols*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 16368 and the following apply.

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
control
device actuated by an operator to affect a response from the MEWP

3.1.1
primary control
control (3.1) used by the operator for travelling or movement of the extending structure

3.1.2
secondary control
any *control* (3.1) of the MEWP other than a *primary control* (3.1.1)

3.1.3
multi-functional control
control (3.1) which is capable of providing two or more functions simultaneously

Note 1 to entry: A multi-functional control can also be a *multi-purpose control* (3.1.4).

EXAMPLE A combination of steering and travel, or a combination of slewing and boom elevation.

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3.1.4
multi-purpose control
control which, depending on the mode selected, provides separate and distinct functions using the same actuating movement

EXAMPLE A multi-purpose control can also be a *multi-functional control* (3.1.3).

3.1.5
mode select control
control (3.1) used to select the operating mode of a *multi-purpose control* (3.1.4)

EXAMPLE Travel mode, extending structure mode.

3.1.6
travel support control
control (3.1) used during travel to warn of movements or adapt the MEWP travel configuration

EXAMPLE Horn, steer mode, differential lock, torque.

3.1.7
bi-directional foot control
rocker-type foot operated pedal *control* (3.1) capable of being operated in two directions

3.2
control actuating force
force exerted at the centre of the manufacturer's specified *control* (3.1) contact surface in order to activate a *control* (3.1) function

3.3
inadvertent activation
any *control* (3.1) activation other than that intentionally initiated by the operator

3.4
operation
performance of functions of a MEWP within the scope of its specifications and in accordance with the manufacturer's instructions, work rules, and applicable governmental regulations

[SOURCE: ISO 18893:2014, 3.7]

3.5
primary working configuration
configuration of a MEWP, when in the elevated position identified by the manufacturer for *control* (3.1) orientation

3.6
primary travel configuration
configuration of a MEWP, when in the travel position identified by the manufacturer for *control* (3.1) orientation

4 Control actuating forces and torques

4.1 The control actuating forces and torques shall be in accordance with the values given in Table 1.

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