INTERNATIONAL STANDARD

ISO 20381

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Mobile elevating work platforms — Symbols for operator controls and other displays

Plates-formes élévatrices mobiles de personnel — Symboles pour les commandes de l'opérateur et autres indicateurs

Reference number
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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 20381 was prepared by Technical Committee ISO/TC 214, *Elevating work platforms*.

Mobile elevating work platforms — Symbols for operator controls and other displays

IMPORTANT — The electronic file of this document contains colours which are considered to be useful for the correct understanding of the document. Users should therefore consider printing this document using a colour printer.

1 Scope

This International Standard establishes general graphic symbols for the operator controls and other displays of mobile elevating work platforms (MEWPs).

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.

IEC 80416-3:2002, *Basic principles for graphical symbols for use on equipment — Part 3: Guidelines for the application of graphical symbols*

3 Terms and definitions

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

3.1
symbol
visually perceptible figure used to transmit information independently of language

NOTE It can be produced by drawing, printing or other means.

4 General

4.1 Symbols shall be as shown in the successive clauses of this International Standard. However, symbols that are shown in outline form may, in actual use, be filled for enhanced clarity of reproduction and to improve visual perception by the operator, except as otherwise noted for individual symbols.

It is recommended that symbols be made as simple as possible, especially because they will be submitted to the effects of dust, painting, etc.

4.2 Limitations inherent in some reproduction and display technologies can require increased line thickness or other minor modifications of symbols. Such modifications are acceptable, provided the symbol remains unchanged in its basic graphical elements and is easily discernible by the operator.

4.3 Additionally, to improve the appearance and perceptibility of a graphical symbol or to coordinate with the design of the equipment to which the symbol is applied, it could be necessary to change the thickness or to round the corners of a symbol. The graphic designer is normally free to make such changes provided that the essential perceptual characteristics of the symbols are maintained in accordance with IEC 80416-3:2002, 6.1.

4.4 For actual use, all symbols shall be reproduced large enough to be easily discernible by the operator. See IEC 80416-3:2002, Clause 5, for the proper sizing of symbols.

4.5 Symbols on controls and displays shall have good contrast to their background. A light symbol on a dark background is preferred for most controls. Displays may use either a light symbol on a dark background or a dark symbol on a light background, depending upon which of these alternatives provides the best visual perception. When a symbol image is reversed (for example, from black on white to white on black or vice versa), it shall be done for the entire symbol.

4.6 Most symbols are constructed using a building block approach in which various symbols and symbol elements are combined in a logical manner to produced new symbols. For example, symbol 8.4 for the engine lubricating oil filter has been constructed using engine symbol 6.1, oil symbol 6.5 and filter symbol 6.10.

4.7 The symbol may be located on the control panel in any desired position according to the movement it shows.

4.8 Symbols shall be located on, or adjacent to, the control or display that is being identified. Where more than one symbol is required for a control, the symbols shall be located in relation to the control such that the movement of a control towards the symbol shall effect the function depicted by that symbol.

4.9 ISO/IEC registration numbers are provided for the symbols in this International Standard. Registration numbers below 5000 refer to ISO 7000. Registration numbers above 5000 refer to IEC 60417.

NOTE At the time of publication of this International Standard, a number of symbols for operator controls and other displays had yet to be registered. These are intended to form the subject of an Amendment to this International Standard, to be published at a later date and to include symbols for the following: chain-breaking, chain slack, on-track travel mode, footswitch activation, MEWP with telescopic boom (basic shape, raise/lower, extend/retract, levelling of platform, jib raise/lower), MEWP with articulating boom (basic shape, upper and lower boom raise/lower and extend/retract, levelling of platform, jib raise/lower), platform rotation, MEWP on lorry with telescopic boom (raise/lower, jib raise/lower), MEWP on lorry with articulating boom (upper and lower boom raise/lower and extend/retract, levelling of platform), vertical MEWP (basic shape, raise/lower), automatic chassis level control, platform overload, maximum wheel load, maximum stabilizer/outrigger load, and maximum tilt (inclination).

4.10 Symbols are presented within the outer limits of a 24 mm square grid (32 % of the original size on the ISO graphics grid). Corner marks delimit the corners of the 75 mm square graphics grid and are not part of the symbol itself, but are provided to ensure consistent presentation of all symbol graphics.

5 Colour

5.1 When used on illuminated displays, the following colours have the meanings indicated:

— red: failure or serious malfunction; requires immediate attention;

— yellow or amber: outside normal operating limits;

— green: normal operating condition.

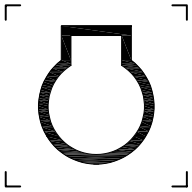
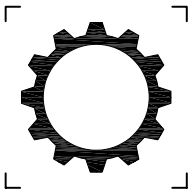
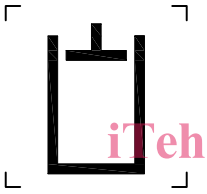
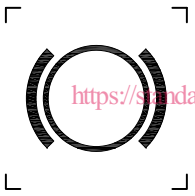
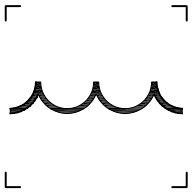
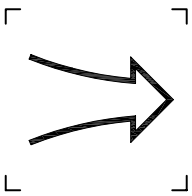
5.2 In addition, certain colours are used for a specific function:

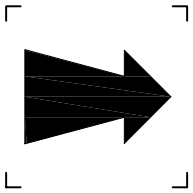
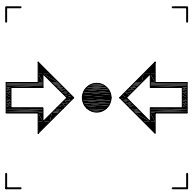
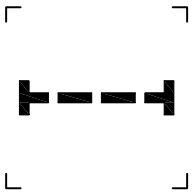
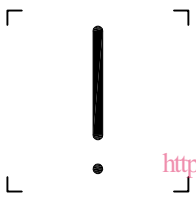
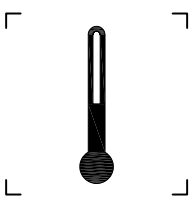
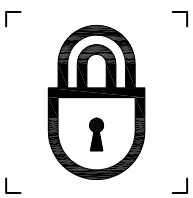
— blue: headlight main-/high-beam display;

— red: hazard warning display;

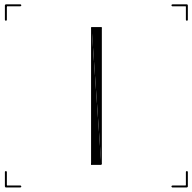
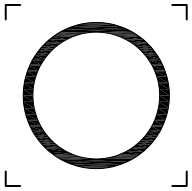
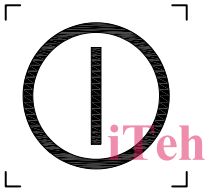
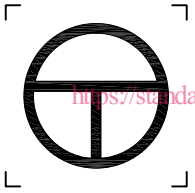
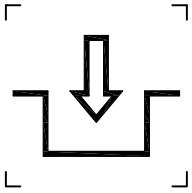
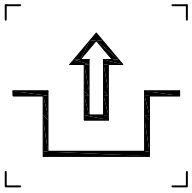
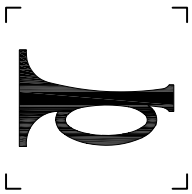
— green: turn signal display.

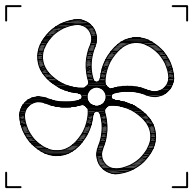
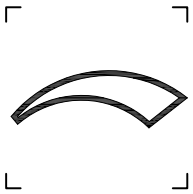
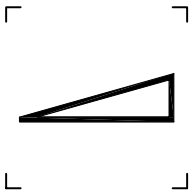
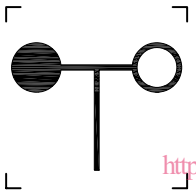
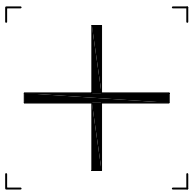
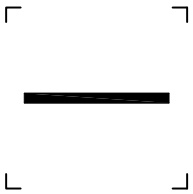
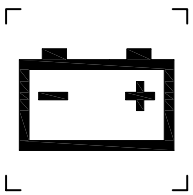
6 Basic symbol shapes

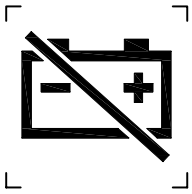
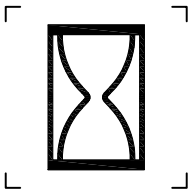
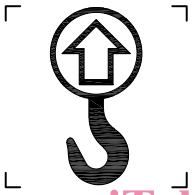
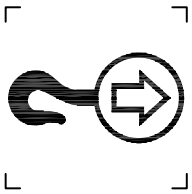
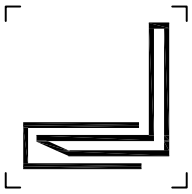
Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
6.1		Engine	ISO 7000-1156
6.2		Transmission	ISO 7000-1166
6.3		Hydraulic system	ISO 7000-1409
6.4		Brake system	ISO 7000-1399
6.5		Oil	ISO 7000-1056
6.6		Coolant (water)	ISO 7000-0536
6.7		Intake air	ISO 7000-1604

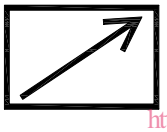
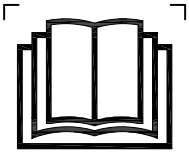
Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
6.8		Exhaust gas	ISO 7000-1605
6.9		Pressure	ISO 7000-1701
6.10		Filter	ISO 7000-1369
6.11		Failure/malfunction	ISO 7000-1603
6.12		Temperature	ISO 7000-0034
6.13		Lock	ISO 7000-1656
6.14		Unlock	IEC 60417-5570

7 General symbols

Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
7.1		On/start	IEC 60417-5007
7.2		Off/stop	IEC 60417-5008
7.3		On and Off	IEC 60417-5010
7.4		On and Off (push-button) (Switching on with push-button press only)	IEC 60417-5011
7.5		Engaging, mechanical activation (Symbol may be rotated 90° for a clearer visual representation.)	ISO 7000-0022
7.6		Disengaging, mechanical deactivation (Symbol may be rotated 90° for a clearer visual representation.)	ISO 7000-0023
7.7		Horn	ISO 7000-0244

Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
7.8		Ventilation	ISO 7000-0089
7.9		Continuously variable control — Rotational	ISO 7000-1364
7.10		Continuously variable control — Linear	IEC 60417-5004
7.11		Wind speed	ISO 7000-1698
7.12		Plus/increase/positive polarity	IEC 60417-5005
7.13		Minus/decrease/negative polarity	IEC 60417-5006
7.14		Battery	ISO 7000-0247

Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
7.15		Battery power — Disconnect	ISO 7000-2063
7.16		Hour meter/elapsed operating hours	ISO 7000-1366
7.17		Lift point	ISO 7000-1368
7.18		Tie-down point	ISO 7000-2069
7.19		Tow point	ISO 7000-2686
7.20		Fork-lift pocket	ISO 7000-2869
7.21		Very slow; creeper	ISO 7000-2812

Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
7.22		Slow	ISO 7000-2811
7.23		Fast	ISO 7000-2810
7.24		High torque/high force	ISO 7000-2689
7.25		Remote control	ISO 7000-0093
7.26		Rope/cable breaking	ISO 7000-2687
7.27		Rope/cable slack	ISO 7000-2688
7.28		Read operator's manual	ISO 7000-0790