
Cranes — Graphical symbols —

Part 2: Mobile cranes

*Appareils de levage à charge suspendue — Symboles graphiques —
Partie 2: Grues mobiles*

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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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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.

This document was prepared by Technical Committee ISO/TC 96, *Cranes*.

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 second edition cancels and replaces the first edition (ISO 7296-2:1996), which has been technically revised. The main changes compared to the previous edition are as follows:

- the chart formatting has been updated;
- all registered ISO 7000 symbols that are to be used with mobile cranes exactly as registered have been removed. For registered ISO 7000 symbols having optional configurations (e.g. A and B), the option to be used with mobile cranes is shown.

A list of all parts in the ISO 7296 series can be found on the ISO website.

Cranes — Graphical symbols —

Part 2: Mobile cranes

1 Scope

This document establishes graphical symbols for use on operator controls and other displays on mobile cranes as defined in ISO 4306-2.

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.

IEC 80416-1, *Basic principles for graphical symbols for use on equipment — Part 1: Creation of graphical symbols for registration*

ISO 80416-2, *Basic principles for graphical symbols for use on equipment — Part 2: Form and use of arrows*

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

3 Terms and definitions

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

symbol

graphical symbol

visually perceptible figure with a particular meaning used to transmit information independently of language

[SOURCE: ISO 7001:2007, 3.1]

4 General

4.1 Symbols shall be as shown in [Clauses 5 to 12](#). Symbols which are shown in outline form may be filled, when actually used, for enhanced clarity of reproduction and improved visual perception by the operator, except as otherwise noted for individual symbols.

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 identifiable by the operator.

4.3 Additionally, to improve the appearance and perceptibility of a symbol, or to coordinate with the design of the equipment to which the symbol is applied, it can be necessary to change the line thickness or to round the corners of a symbol. The graphical designer is normally free to make such changes, provided that the essential perceptual characteristics of the symbol are maintained (see IEC 80416-1).

4.4 For actual use, all symbols shall be reproduced large enough to be easily identifiable by the operator. See IEC 80416-1 for guidelines on the proper sizing of symbols. Symbols shall be used in the orientations shown in this document unless otherwise noted for individual symbols.

4.5 Most symbols are constructed using a building block approach in which various symbols and symbol elements are combined in a logical manner to produce a new symbol.

4.6 If a symbol shows a machine or parts of a machine from a side view, a machine moving from right to left across the symbol grid area shall be assumed. If a symbol shows a machine or parts of a machine from an overhead (top) view, a machine moving from bottom to top across the symbol grid area shall be assumed.

4.7 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 on which alternative provides the best visual perception. When a symbol image is reversed (for example, from black-on-white to white-on-black and vice versa), it shall be done for the entire symbol.

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

4.9 Arrows used in symbols shall conform to the requirements of ISO 80416-2. IEC 80416-1 shall be consulted for the general principles of creating symbols.

4.10 Letters and numerals may be used as symbols, but are not registered or published in ISO 7000. In certain clauses, letters and numerals have the meaning indicated when used in association with transmission gear controls and displays on mobile cranes. The fonts shown in this document are not intended to be restrictive. Other fonts may be used, but care shall be taken to ensure that legibility is maintained.

4.11 Symbols in this document are presented at 32 % of original size. The grid marks "L" denote the corners of the 75 mm square graphics grid from IEC 80416-1. The grid marks are not part of the symbol, 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, serious malfunction, or dangerous operating condition that requires immediate attention;
- yellow or amber: approaching a dangerous operating condition;
- green: normal operating condition.

5.2 In addition, certain colours are used for specific functions;

- blue: headlight main/high beam display;

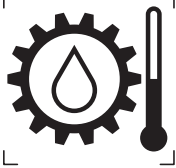
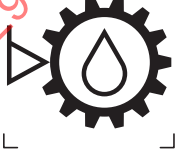
- red: hazard warning display;
- green: turn signal display.

5.3 If colour is used on symbols for heating and/or cooling systems, the colour red shall be used to indicate hot and the colour blue shall be used to indicate cold.

6 Basic symbols

No.	Registration No.	Description/Application	Symbol
6.1	ISO 7000-1166A	Transmission	
6.2	ISO 7000-1603B	Malfunction, general failure	
6.3	ISO 7000-1604	Intake air Used as symbol element only in combination with other symbols (e.g. engine. Shall be an outline in all applications.)	
6.4	ISO 7000-1605	Exhaust gas Used as symbol element only in combination with other symbols (e.g. engine. Shall be filled in all applications.)	
6.5	ISO 7000-1701	Pressure (Used as an independent symbol where the medium under pressure is not specified. If the medium is specified, replace the black circle with a symbol for the medium.)	

7 Transmission symbols

No.	Registration No.	Description/Application	Symbol
7.1	ISO 7000-1168A	Transmission oil temperature	
7.2	ISO 7000-1396A	Transmission failure/malfunction	
7.3	ISO 7000-1398A	Transmission oil level	
7.4	a	Forward	F
7.5	a	High	H
7.6	a	Low	L
7.7	a	Neutral	N
7.8	a	Park	P
7.9	a	Reverse	R
7.10	a	Reverse first gear (Use sequential numbers as needed for additional reverse gears: R2 for reverse second gear, etc.)	R1
7.11	a	First gear	1
7.12	a	Second gear	2
7.13	a	Third gear	3
^a Letters and numbers used as symbols are not registered.			

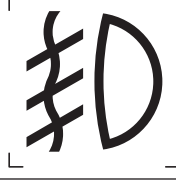
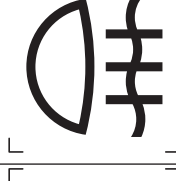
8 Brake symbols

No.	Registration No.	Description/Application	Symbol
8.1	ISO 7000-1403A	Brake system temperature	

9 Fuel symbols

No.	Registration No.	Description/Application	Symbol
9.1	ISO 7000-0245	Fuel (The type of fuel may be indicated inside the symbol.)	
9.2	ISO 7000-1395B	Fuel shut-off (Not to be used as engine stop symbol.)	

10 Lighting symbols

No.	Registration No.	Description/Application	Symbol
10.1	ISO 7000-0633	Front fog light (If one control is used for both front and rear fog lights, the symbol designated front fog light shall be used.)	
10.2	ISO 7000-0634	Rear fog light (If one control is used for both front and rear fog lights, the symbol designated front fog light shall be used.)	
10.3	ISO 7000-1141B	Beacon	

11 Window symbols

No.	Registration No.	Description/Application	Symbol
11.1	ISO 7000-0635A	Windscreen/windshield demisting and defrosting	