
Cranes — Hand signals used with cranes

Appareil de levage à charge suspendue — Signaux de la main utilisés avec les grues

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 96, *Cranes*, Subcommittee SC 5, *Use, operation and maintenance*.

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Introduction

The objective of this International Standard is to achieve uniform hand signals on projects where more than one country having unique hand signals is involved.

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Cranes — Hand signals used with cranes

1 Scope

This International Standard gives requirements for hand signals to be used in lifting operations.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4306-1, *Cranes — Vocabulary — Part 1: General*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4306-1 and the following apply.

3.1

cease operation

dogging

stop operation permanently or temporarily after release of load

3.2

slewing

swinging

radial horizontal movement of load with crane base stationary

3.3

travel

movement of the whole crane (mobile and truck mounted)

4 Requirements for hand signals

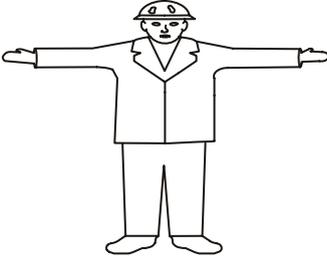
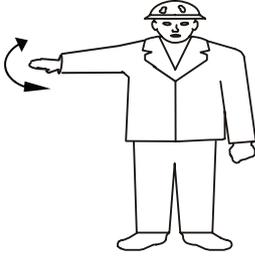
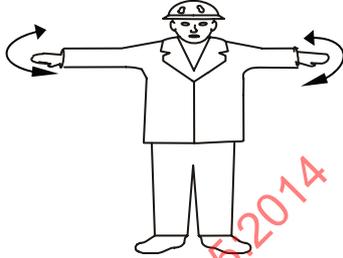
4.1 General

The following requirements for hand signals shall apply.

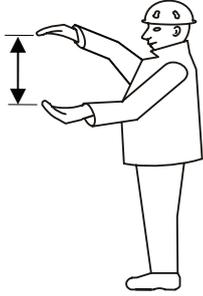
- a) The signals shall be used accordingly and fully understood by the crane operators.
- b) The signal shall be clear and concise in order to avoid misunderstanding.
- c) Non-specific one-arm signals shall be acceptable using either arm (a left or right indication is a specific signal).
- d) A signaller shall
 - 1) be in a safe position,
 - 2) be clearly visible to the operator, and
 - 3) have a clear view of the load or equipment.
- e) Signals to the operator shall be given only by one person. The only exception shall be the emergency stop signal.

f) Where applicable, signals can be combined and used.

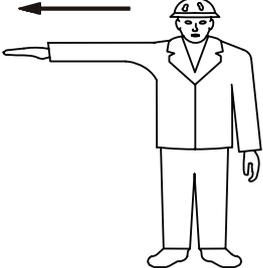
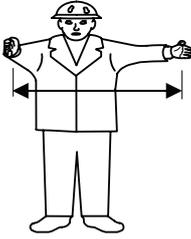
4.2 General hand signals

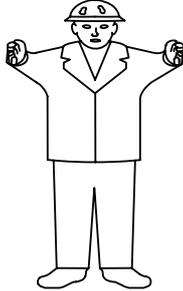
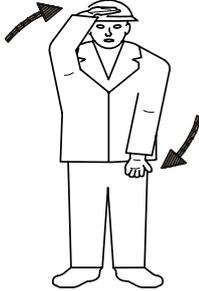
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|  <p>Figure 1 Operations start (follow my instructions) Outstretch both arms horizontally with the hands open and the palm facing forward.</p> |  <p>Figure 2 Stop (stop normally) Arm extended, palm down, move arm back and forth horizontally.</p> |  <p>Figure 3 Emergency stop (stop quickly) Both arms extended, palms down, move arms back and forth horizontally</p> |
|  <p>Figure 4 Cease operation (stop following my instructions) Clasp the hands at chest height in front of body.</p> |  <p>Figure 5 Inching or dead slow Rub palms in a circular motion against each other. After this signal, any other applicable hand signals shall apply.</p> | |

4.3 Vertical movements

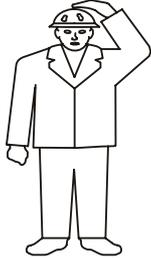
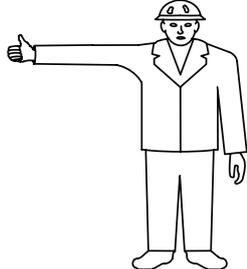
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|  <p>Figure 6</p> <p>Indicating vertical distance</p> <p>Keep both arms extended in front of the body, one above the other with palms facing each other.</p> |  <p>Figure 7</p> <p>Raise/lift the load at a steady rate</p> <p>Raise one arm above the head, with the hand closed and the index finger pointing upwards. Make small horizontal type circles with the forearm.</p> |  <p>Figure 8</p> <p>Raise slowly</p> <p>Use raising signal with one hand and other palm motionless on top of the hand that gives the signal</p> |
|  <p>Figure 9</p> <p>Lower the load at a steady rate</p> <p>Extend one arm downwards but away from the body, with the hand closed and the index finger pointing downwards. Make small flat circles with the forearm.</p> |  <p>Figure 10</p> <p>Lower slowly</p> <p>Use lowering signal with one hand with the other palm motionless below facing the hand that gives the signal.</p> | |

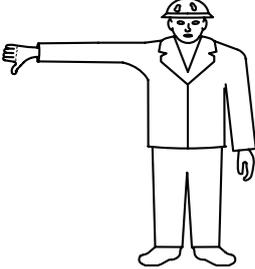
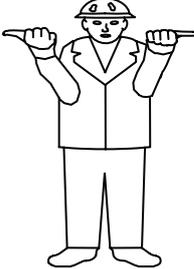
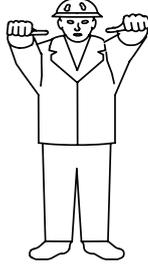
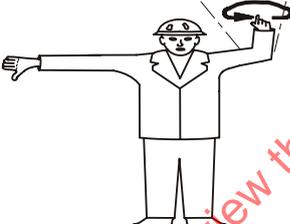
4.4 Horizontal movements

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|  <p>Figure 11 Travelling/slewing in the direction indicated Hold the extended arm in a horizontal position in the required direction, with the hand open and the palm facing downwards.</p> |  <p>Figure 12 Travelling away from me Keep both arms at the sides of the body with the forearms held horizontally to the front, both hands open, and the palms facing forward. Repeatedly move the forearms up and down between the horizontal and the vertical positions.</p> |  <p>Figure 13 Travelling towards me Keep both arms at the sides of the body with the forearms held vertically, both hands open, palms facing upward. Repeatedly move the forearms up and down.</p> |
|  <p>Figure 14a</p>  <p>Figure 14b Travel of both crawler tracks Rotate both fists around each other in front of the body in the direction of travel; forwards or backwards.</p> |  <p>Figure 15 Travel of one crawler track Raise a fist to indicate locking of the track on one side. Rotate the other fist vertically in front of the body to indicate travelling of the opposite track.</p> |  <p>Figure 16 Indicating horizontal distance Keep both arms extended horizontally in front of body with palms facing each other.</p> |

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|  <p>Figure 17a</p> |  <p>Figure 17b</p> |
| <p>Turnover (by two cranes or two hooks)</p> <p>Keep both arms extended forward, parallel, and horizontally, and turn 90° in the direction of turnover.</p> <p>Note Make sure the lifting capacity of each crane or hook has sufficient capacity for sudden unbalanced tipping loadings.</p> | |

4.5 Equipment-related movements

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|  <p>Figure 18</p> |  <p>Figure 19</p> |  <p>Figure 20</p> |
| <p>Lifting using the main hoist</p> <p>Keep one hand on top of the head. Keep the other arm at the side of the body.</p> <p>After this signal, any other hand signals will be applicable to the main hoist only.</p> <p>Where more than one main hoist is present, the signaller can indicate the number of the crane by pointing or showing with a pointed finger.</p> | <p>Lifting using the auxiliary hoist</p> <p>Hold the forearm of one arm vertically, with the hand clenched. Grasp the elbow of this arm with the other hand.</p> <p>After this signal, any other applicable hand signals will be applicable to the auxiliary hoist only.</p> | <p>Raising of boom</p> <p>Keep one arm extended horizontally with the thumb up</p> |

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|  <p>Figure 21 Lowering of boom Keep one arm extended horizontally with the thumb down.</p> |  <p>Figure 22 Extension of boom or trolley out Keep both hands (with clenched fists) extended to the front with thumbs pointing away from each other</p> |  <p>Figure 23 Retraction of boom or trolley in Keep both hands (with clenched fists) extended to the front with thumbs pointing towards each other.</p> |
|  <p>Figure 24 Raising boom while lowering load Keep one arm extended horizontally, thumb pointing up, and extend the other arm downwards but away from the body making small flat circles with the forearm</p> |  <p>Figure 25 Lowering boom while raising load Keep an arm extended, thumb pointing down, and flex fingers in and out for as long as movement is required.</p> | |

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