

BS ISO 16715:2014



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Cranes — Hand signals used with cranes

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National foreword

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**Cranes — Hand signals used with
cranes**

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



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Foreword

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

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.

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

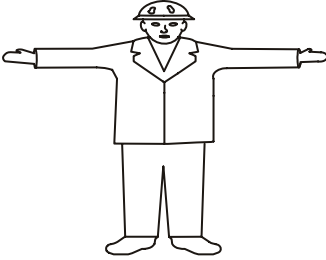
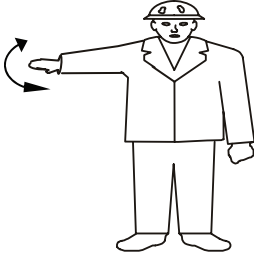
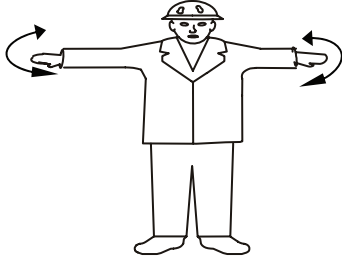

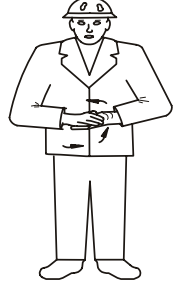
4.1 General

The following requirements for hand signals shall apply.

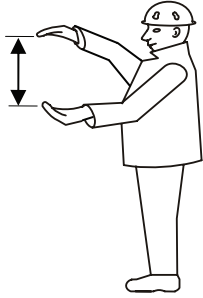
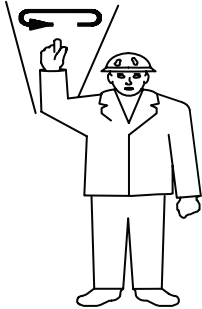

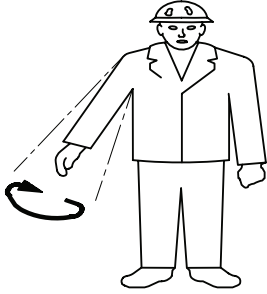
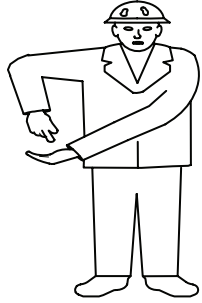
- a) The signals shall be used accordingly and fully understood by the crane operators.
- b) The signal shall be clear and concise in order to avoid misunderstanding.
- c) Non-specific one-arm signals shall be acceptable using either arm (a left or right indication is a specific signal).
- d) A signaller 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.

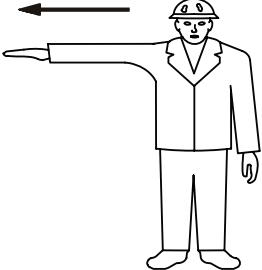


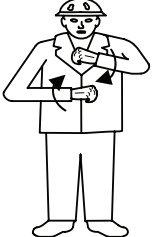
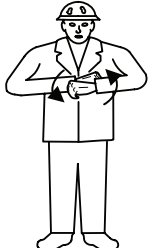

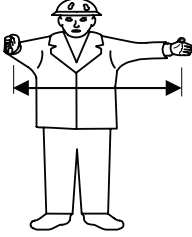
4.2 General hand signals

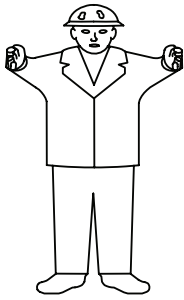
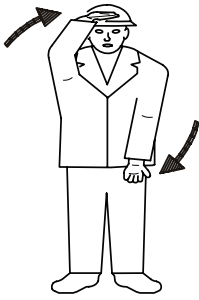
 <p>Figure 1 Operations start (follow my instructions) Outstretch both arms horizontally with the hands open and the palm facing forward.</p>	 <p>Figure 2 Stop (stop normally) Arm extended, palm down, move arm back and forth horizontally.</p>	 <p>Figure 3 Emergency stop (stop quickly) Both arms extended, 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

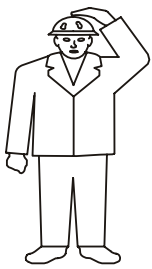
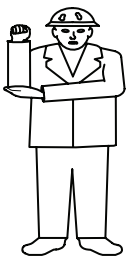
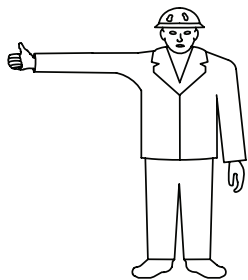
 <p>Figure 6</p> <p>Indicating vertical distance</p> <p>Keep both arms extended in front of the body, one above the other with palms facing each other.</p>	 <p>Figure 7</p> <p>Raise/lift the load at a steady rate</p> <p>Raise one arm above the head, with the hand closed and the index finger pointing upwards. 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

 <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>

		
Figure 17a	Figure 17b	
<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

		
Figure 18	Figure 19	Figure 20
<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>

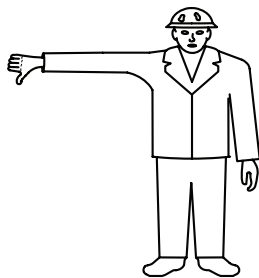


Figure 21

Lowering of boom

Keep one arm extended horizontally with the thumb down.

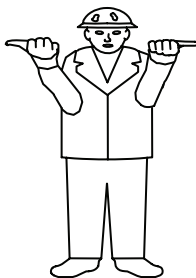


Figure 22

Extension of boom or trolley out

Keep both hands (with clenched fists) extended to the front with thumbs pointing away from each other

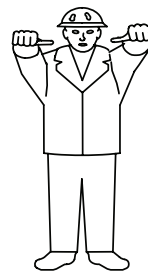


Figure 23

Retraction of boom or trolley in

Keep both hands (with clenched fists) extended to the front with thumbs pointing towards each other.



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

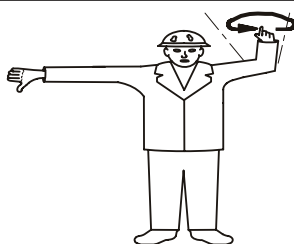


Figure 25

Lowering boom while raising load

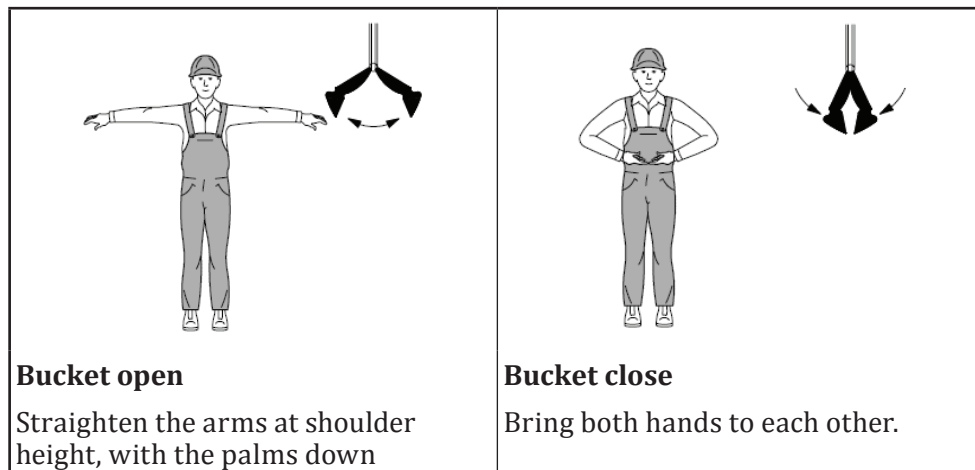
Keep an arm extended, thumb pointing down, and flex fingers in and out for as long as movement is required.

Annex A (informative)

Lifting attachment control

Hand signals for lifting attachments can be required to indicate their specific function(s).

Clamshell bucket



Bibliography

- [1] ISO 15513, *Cranes — Competency requirements for crane drivers (operators), slingers, signallers and assessors*

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