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## **Cranes — Control layout and characteristics —**

### **Part 3: Tower cranes**

*Appareils de levage à charge suspendue — Disposition et  
caractéristiques des commandes —*

*Partie 3: Grues à tour*



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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](http://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](http://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 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 7, *Tower cranes*.

This third edition cancels and replaces the second edition (ISO 7752-3:2010), which has been technically revised.

ISO 7752 consists of the following parts, under the general title *Cranes — Controls — Layout and characteristics*:

- *Part 1: General principles*
- *Part 2: Basic arrangement and requirements for mobile cranes*
- *Part 3: Tower cranes*
- *Part 4: Jib cranes*
- *Part 5: Overhead travelling cranes and portal bridge cranes*

# Cranes — Control layout and characteristics —

## Part 3: Tower cranes

### 1 Scope

This part of ISO 7752 specifies the particular requirements for controls for tower cranes as defined in ISO 4306-3:2003 and ISO 4306-3:2003/Amd. 1:2011 and the arrangement of basic control used for positioning loads.

NOTE For the general principles and requirements for the controls of cranes, see ISO 7752-1.

### 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 4306-1:2007, *Cranes — Vocabulary — Part 1: General*

ISO 4306-3:2003, *Cranes — Vocabulary — Part 3: Tower cranes*

ISO 4306-3:2003/Amd 1:2011, *Cranes — Vocabulary — Part 3: Tower cranes*

ISO 7752-1:2010, *Cranes — Control layout and characteristics — Part 1: General principles*

IEC 60204-32:2008, *Safety of machinery — Electrical equipment of machines — Part 32: Requirements for hoisting machines*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4306-1:2007, ISO 4306-3:2003, ISO 4306-3/A1:2011, and ISO 7752-1:2010 apply.

### 4 Controls

#### 4.1 Requirements

Requirements given in ISO 7752-1:2010 apply.

#### 4.2 Basic control arrangement

##### 4.2.1 General

The basic controls shall be arranged as shown in [Figure 1](#), following the general rules:

- on the right: hoisting and lowering of the load, travelling of the crane;
- on the left: luffing or movement of the crab, slewing of the crane.

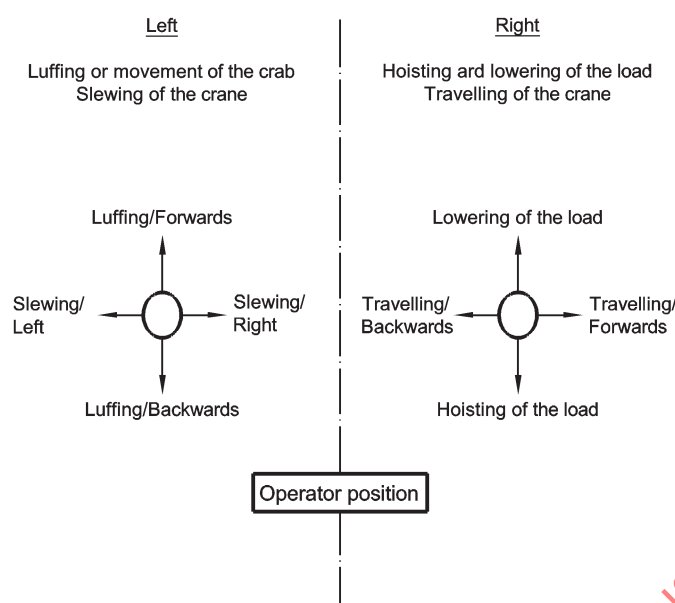


Figure 1 — Layout of controls on tower cranes

#### 4.2.2 Control levers of the ball-and-socket or universal joint type

When control levers of the ball-and-socket or universal joint type are used, the movements of the crane shall correspond to the direction of lever movement shown in Table 1.

Table 1 — Movements of the crane and direction of lever movement

| Movement of the crane                                                                                                          | Direction of lever movement                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Hoisting of the load, luffing in, inward movement of the crab or jib if the latter is capable of moving horizontally           | Towards the operator (lever backwards)                                                                                          |
| Lowering of the load, lowering of the jib, outward movement of the crab or jib if the latter is capable of moving horizontally | Away from the operator (lever forwards)                                                                                         |
| Slewing to the right                                                                                                           | Lever to the operator's right                                                                                                   |
| Slewing to the left                                                                                                            | Lever to the operator's left                                                                                                    |
| Travelling of the crane                                                                                                        | Lever to the operator's left or right, depending on the position of the operator in relation to the desired direction of travel |

## 5 Consoles

Requirements given in ISO 7752-1:2010 apply.

## 6 Stop

The requirements of IEC 60204-32:2008, 9.2.7.3, shall be applied. For tower cranes, the time value is 1 s. For radio remote controls, the time is 0,5 s to 2 s.