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Cranes -- Controls -- Layout and characteristics -- Part 3: Tower cranes

Appareils de levage à charge suspendue -- Organes de service -- Disposition et caractéristiques -- Partie 3: Grues à tour

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Ta slovenski standard je istoveten z: ISO 7752-3:1993

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ICS:

53.020.20 Dvigala Cranes

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INTERNATIONAL
STANDARD

ISO
7752-3

First edition
1993-12-15

**Cranes — Controls — Layout and
characteristics —**

Part 3:
Tower cranes

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*Appareils de levage à charge suspendue — Organes de service —
Disposition et caractéristiques —*
Partie 3. Grues à tour



Reference number
ISO 7752-3:1993(E)

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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.

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.

International Standard ISO 7752-3 was prepared by Technical Committee ISO/TC 96, *Cranes*, Sub-Committee SC 7, *Tower cranes*.

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*

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Cranes — Controls — 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 4306-1 and ISO 4306-3 and the arrangement of basic controls used for positioning loads.

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

It applies to the controls of

- tower cranes for building and general construction work that can be dismantled,
- permanently erected tower cranes,
- hammerhead cranes,
- dockside and shipbuilders' tower cranes.

It does not apply to the controls of

- power-driven mobile jib cranes which may be fitted with a tower attachment,
- erection masts, with or without jibs.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 7752. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 7752 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO

maintain registers of currently valid International Standards.

ISO 4306-1:1990, *Cranes — Vocabulary — Part 1: General*.

ISO 4306-3:1991, *Cranes — Vocabulary — Part 3: Tower cranes*.

ISO 7752-1:1983, *Lifting appliances — Controls — Layout and characteristics — Part 1: General principles*.

3 Definitions

For the purposes of this part of ISO 7752, the definitions given in ISO 4306-1, ISO 4306-3 and ISO 7752-1 apply.

4 Specific requirements

Additional requirements specific to tower cranes are as follows:

- a) The force necessary to move a handle or control lever shall not exceed 100 N, and that required to move a pedal shall not exceed 200 N.

In any case, the following values are recommended:

- 5 N to 40 N for a right-to-left lever¹⁾;
- 8 N to 60 N for a backwards-to-forwards lever¹⁾;
- 10 N to 150 N for a pedal.

1) 5 N to 10 N are recommended for "joy stick" type controls.

ISO 7752-3:1993(E)

- b) The control devices shall be positioned and designed to reduce the possibility of the crane and the load being inadvertently set in motion.

5 Basic control arrangement

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.

5.1 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.

5.2 Wheel control devices

For wheel control devices, the movements of the crane shall correspond to the direction of wheel movement shown in table 2.

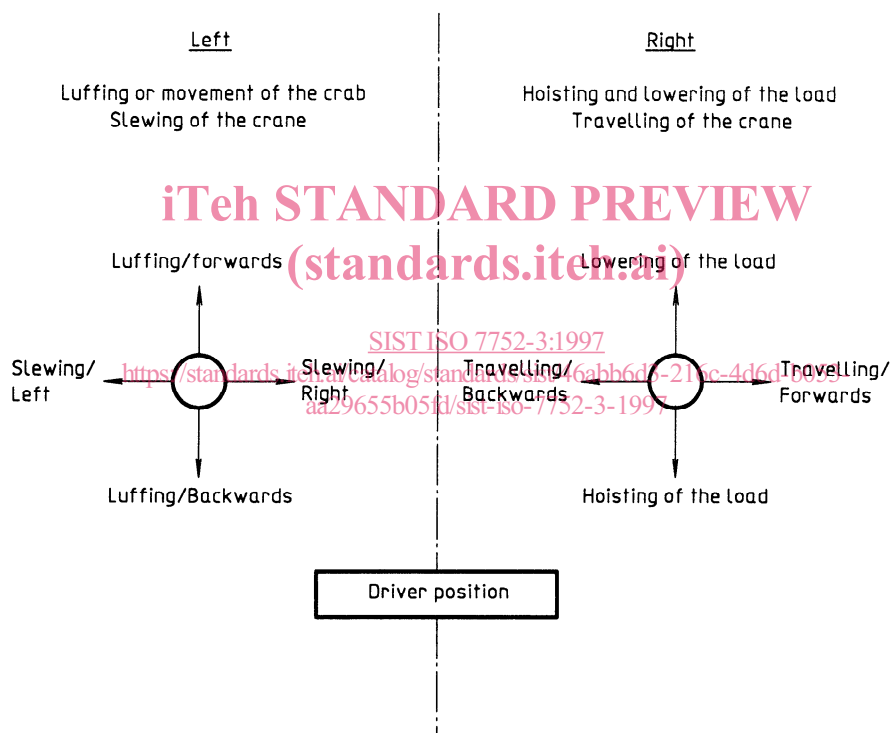


Figure 1 — Layout of controls on tower cranes

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 driver (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 driver (lever forwards)
Slewing to the right	Lever to the driver's right
Slewing to the left	Lever to the driver's left
Travelling of the crane	Lever to the driver's left or right, depending on the position of the driver in relation to the desired direction of travel

Table 2 — Movements of the crane and direction of wheel movement

Movement of the crane	Direction of wheel movement
Hoisting of the load, luffing in, slewing right, inward movement of the crab or jib if the latter is capable of moving horizontally	Rotation clockwise
Lowering of the load, luffing out, slewing left, outward movement of the crab or jib if the latter is capable of moving horizontally	Rotation anticlockwise

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