
Cranes — Cabins and control stations —
Part 3:
Tower cranes

Appareils de levage à charge suspendue — Cabines et postes de conduite —

Partie 3: Grues à tour



Reference number
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Foreword

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The main task of technical committees is to prepare International Standards. 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.

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.

ISO 8566-3 was prepared by Technical Committee ISO/TC 96, *Cranes*, Subcommittee SC 7, *Tower cranes*.

This second edition cancels and replaces the first edition (ISO 8566-3:1992), which has been technically revised.

ISO 8566 consists of the following parts, under the general title *Cranes — Cabins and control stations*:

- *Part 1: General*
- *Part 2: Mobile cranes*
- *Part 3: Tower cranes*
- *Part 4: Jib cranes*
- *Part 5: Overhead travelling and portal bridge cranes*

Cranes — Cabins and control stations —

Part 3: Tower cranes

1 Scope

This part of ISO 8566 specifies the requirements for cabins and control stations for tower cranes as defined in ISO 4306-3. It is intended to be used in conjunction with ISO 8566-1.

2 Normative references

The following referenced documents are indispensable for the application 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.

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

ISO 7752-3, *Cranes — Controls — Layout and characteristics — Part 3: Tower cranes*

ISO 8566-1:2010, *Cranes — Cabins and control stations — Part 1: General*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4306-3 and ISO 8566-1 apply.

4 Control station

The requirements given in ISO 8566-1 apply, with the following modifications.

If a control station takes the place of the operator's cabin and is situated on or inside the crane, it shall:

- a) have guard rails consisting of
 - 1) a handrail 0,9 m to 1,1 m above the flooring,
 - 2) an intermediate rail at the half height, and
 - 3) a skirting-board of 0,1 m in height,

or any arrangement which gives equivalent protection;

- b) be protected by a roof 1,9 m to 2 m above the platform, capable of absorbing the energy of a steel sphere of mass 7 kg falling from a height of 2 m.

5 Cabin

5.1 General

5.1.1 The requirements given in ISO 8566-1 apply, with the following modifications.

5.1.2 The cabin shall not be suspended from a jib. It may be attached to or positioned in the tower in such a way that it cannot be crushed if the jib accidentally falls.

When the cabin is situated inside the tower, the window sections may protrude through the mast structure.

5.1.3 The usable internal dimensions of the cabin shall not be less than the values given in Table 1.

The dimensions shall be sufficient to permit a second person to be present occasionally in the cabin.

Table 1 — Minimum usable internal dimensions

Dimensions in metres

Self-erecting tower cranes			Tower cranes assembled from component parts		
Length	Width	Height	Length	Width	Height
0,8	0,8	2	1,2	1	2

5.1.4 The cabin shall:

- a) be provided with a roof capable of supporting at any point a mass of 100 kg distributed over an area of 0,3 m × 0,3 m;
- b) afford protection to the crane operator in atmospheric conditions such as rain or extremes of heat or cold.

5.1.5 When, from a construction point of view, it is not possible to have an access door as provided for in ISO 8566-1, it is permissible to provide access to the cabin by means of a trapdoor in the floor or in the ceiling of the cabin.

The minimum dimensions for effective hatch apertures shall be 0,55 m × 0,55 m.

When access is gained by means of a trapdoor in the floor, an emergency exit shall be provided by means of an emergency trapdoor either in the ceiling or in the side of the cabin. When the emergency trapdoor cannot be reached from the floor, a ladder shall be provided.

When access is gained by means of a trapdoor in the ceiling, the trapdoor shall only open upwards.

On self-erecting cranes, the hatch:

- may be under the operator's seat, only if another solution is not possible;
- may have its dimensions reduced to 0,50 m × 0,50 m when necessary due to the size of the crane.

5.1.6 For self-erecting tower cranes, the dimensions of the standing area shall be 0,2 m × 0,6 m at a minimum.

5.1.7 On tower cranes, windscreen wipers and washers shall be provided on the front cabin window.

5.1.8 The layout and characteristics of controls shall be in accordance with ISO 7752-3.

5.1.9 For self-erecting cranes, a power socket as required in ISO 8566-1:2010, 5.1.3, is not necessary.

5.2 Noise

The requirements given in ISO 8566-1 apply with the following additions.

The measurement conditions are defined as the following:

- a) where the energy generator is attached to the crane, the energy generator and the motion mechanism shall be measured separately, if they are not combined;
- b) where these two devices are combined, the measurements shall refer to the whole assembly.

For noise measurements, the motion mechanism and the energy generator shall be installed and used in accordance with the manufacturer's instructions. The energy generator incorporated in the crane shall operate at the full power rating indicated by the manufacturer.

The lifting mechanism shall operate in the following ways in the raising and lowering modes:

- free of load with its drum turning at the rotation speed corresponding to the maximum hook-displacement speed, which shall be as specified by the manufacturer;
- with a rope tension at the drum corresponding to the maximum load (for the minimum radius), with the hook moving at the maximum speed. The load and speed figures shall be as specified by the manufacturer. The speed shall be checked during the test.

The test results are taken as those obtained from the movements producing the greatest sound power level.

Bibliography

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

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