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Cranes — Information to be provided —

Part 5: Overhead travelling cranes and portal bridge cranes

Appareils de levage à charge suspendue — Informations à fournir —
Partie 5: Ponts roulants et ponts portiques

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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).

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).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 96, *Cranes*, Subcommittee SC 9, *Bridge and gantry cranes*.

This second edition cancels and replaces the first edition (ISO 9374-5:1991), which has been technically revised.

The main changes compared to the previous edition are as follows:

— new Clause 3 Terms and definitions has been added;

— Figures 1 to 6 have been redrawn;

— Annex A has been rearranged.

A list of all parts in the ISO 9374 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Cranes — Information to be provided —

Part 5: Overhead travelling cranes and portal bridge cranes

1 Scope

This document specifies information to be provided by:

a) a purchaser in enquiring about or ordering an overhead travelling crane or portal bridge crane;

b) a manufacturer in tendering for or supplying an overhead travelling crane or portal bridge crane.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 7363, *Cranes and lifting appliances — Technical characteristics and acceptance documents*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/

— IEC Electropedia: available at https://www.electropedia.org/

4 Information to be provided by the purchaser with the enquiry or order

The purchaser should provide the information given in Annex A to enable the crane manufacturer to offer or to supply the most suitable overhead travelling crane or portal bridge crane and equipment to satisfy the duty requirements and service conditions.

5 Information to be provided by the manufacturer

5.1 Technical information

The information provided by the manufacturer shall include:

a) technical information and test certificates for the crane to facilitate its installation, testing and use in accordance with ISO 7363 and as appropriate for the appliance;

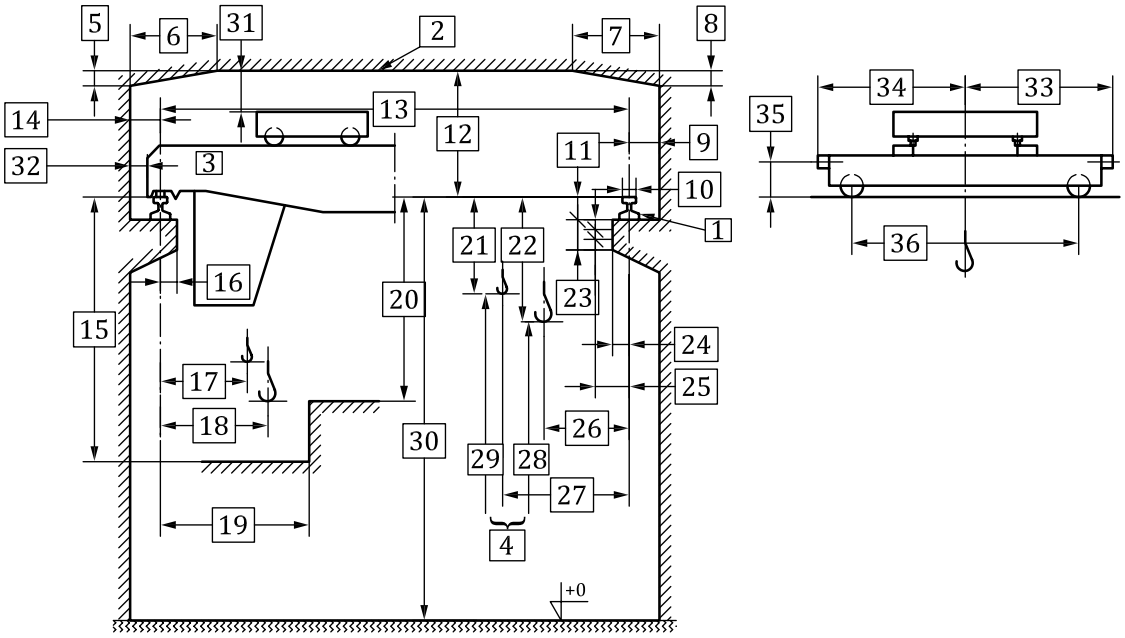
b) an instruction manual which should include details of routine servicing, inspection and maintenance of the crane;

c) erection information, when requested.

All loads applied by the crane to its runway should be calculated in accordance with ISO 8686-5 or as agreed between the manufacturer and the purchaser.

5.2 Dimensions

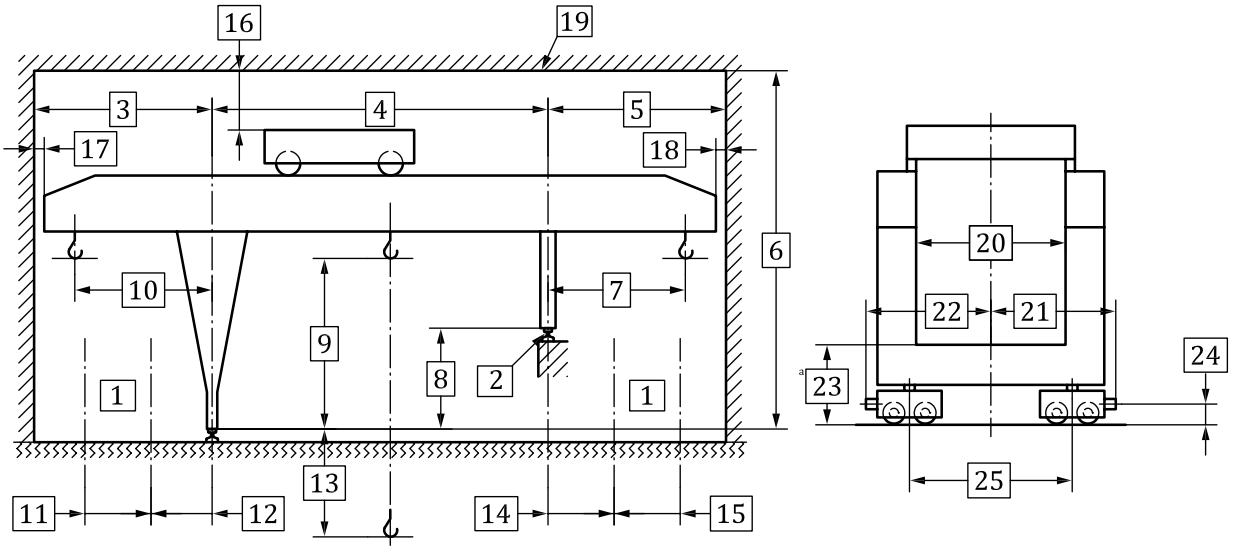
The manufacturer should provide general arrangement drawings, with dimensions, showing that the purchaser's requirements, including the restrictions stated in Figures 1 to 6, are met.



Key

1	type of rail	19	distance between centre of rail and obstruction 2
2	clearance line	20	distance between the top of rail and the top of obstruction 2
3	crane	21	distance between the top of rail and the highest working position of auxiliary hook
4	lifting range	22	distance between the top of rail and the highest working position of main hook
5	inclination of the clearance line on left side	23	rail support beam outline
6	inclination of the clearance line on left side	24	distance between centre of rail and edge of rail support beam on right side
7	inclination of the clearance line on right side	25	distance between centre of rail and conductor
8	inclination of the clearance line on right side	26	main hook approach on right side
9	dimension from right side rail to clearance line	27	auxiliary hook approach on right side
10	rail width	28	main hook lifting range
11	rail height	29	auxiliary hook lifting range
12	distance between the top of rail and the clearance line	30	crane track height
13	span	31	clearance between highest point of crane and clearance line
14	dimension from left side rail to clearance line	32	clearance between outermost point of crane and clearance line
15	distance between the top of rail and the top of obstruction 1	33	width on right side
16	distance between centre of rail and edge of rail support beam on left side	34	width on left side
17	auxiliary hook approach on left side	35	buffer height
18	main hook approach on left side	36	crane wheel base

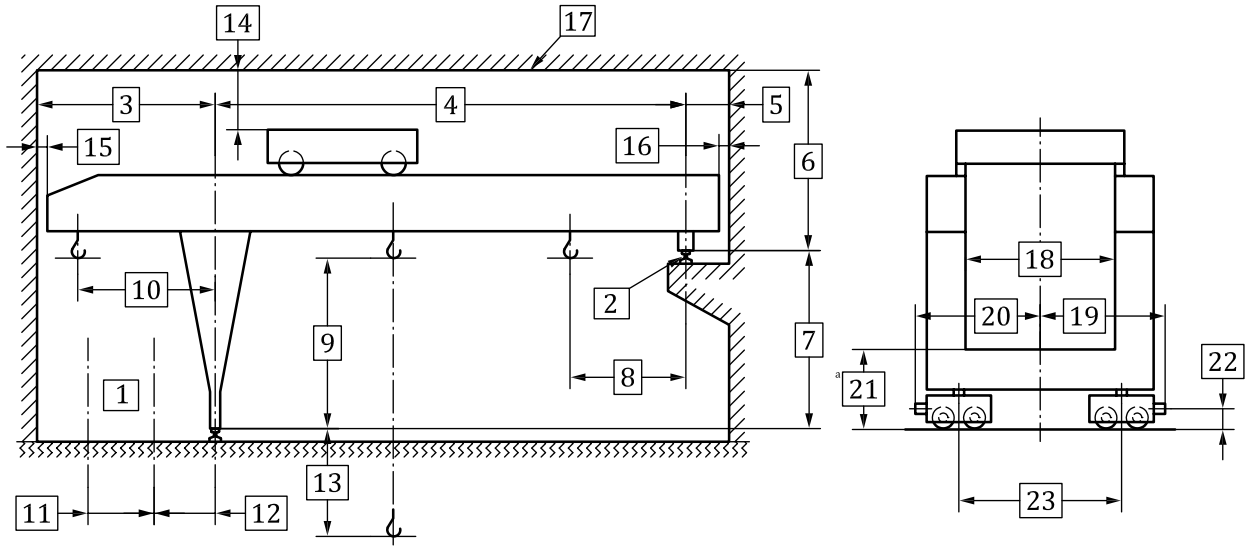
Figure 1 — Overhead travelling crane



Key

1	axis of railways	14	distance between centre of rail and railway on right side
2	type of rail	15	width of railway on right side
3	dimension from left side rail to clearance line	16	clearance between highest point of crane and clearance line
4	span	17	clearance between outermost point on left of crane and clearance line
5	dimension from right side rail to clearance line	18	clearance between outermost point on right of crane and clearance line
6	distance between the top of rail and the clearance line	19	clearance line
7	outreach from right side rail	20	clearance between the legs
8	rail height difference	21	width on right side
9	load-lifting height	22	width on left side
10	outreach from left side rail	23	height of the sill beam
11	width of railway on left side	24	buffer height
12	distance between centre of rail and railway on left side	25	crane wheel base
13	load-lowering height	a	Maximum, if restricted.

Figure 2 — Portal bridge crane



Key

1	axis of railways	13	load-lowering height
2	type of rail	14	clearance between highest point of crane and clearance line
3	dimension from left side rail to clearance line	15	clearance between outermost point on left of crane and clearance line
4	span	16	clearance between outermost point on right of crane and clearance line
5	dimension from right side rail to clearance line	17	clearance line
6	distance between the top of rail and the clearance line	18	clearance between the legs
7	rail height difference	19	width on right side
8	hook approach on right side	20	width on left side
9	load-lifting height	21	height of the sill beam
10	outreach from left side rail	22	buffer height
11	width of railway on left side	23	crane wheel base
12	distance between centre of rail and railway on left side	a	Maximum, if restricted.

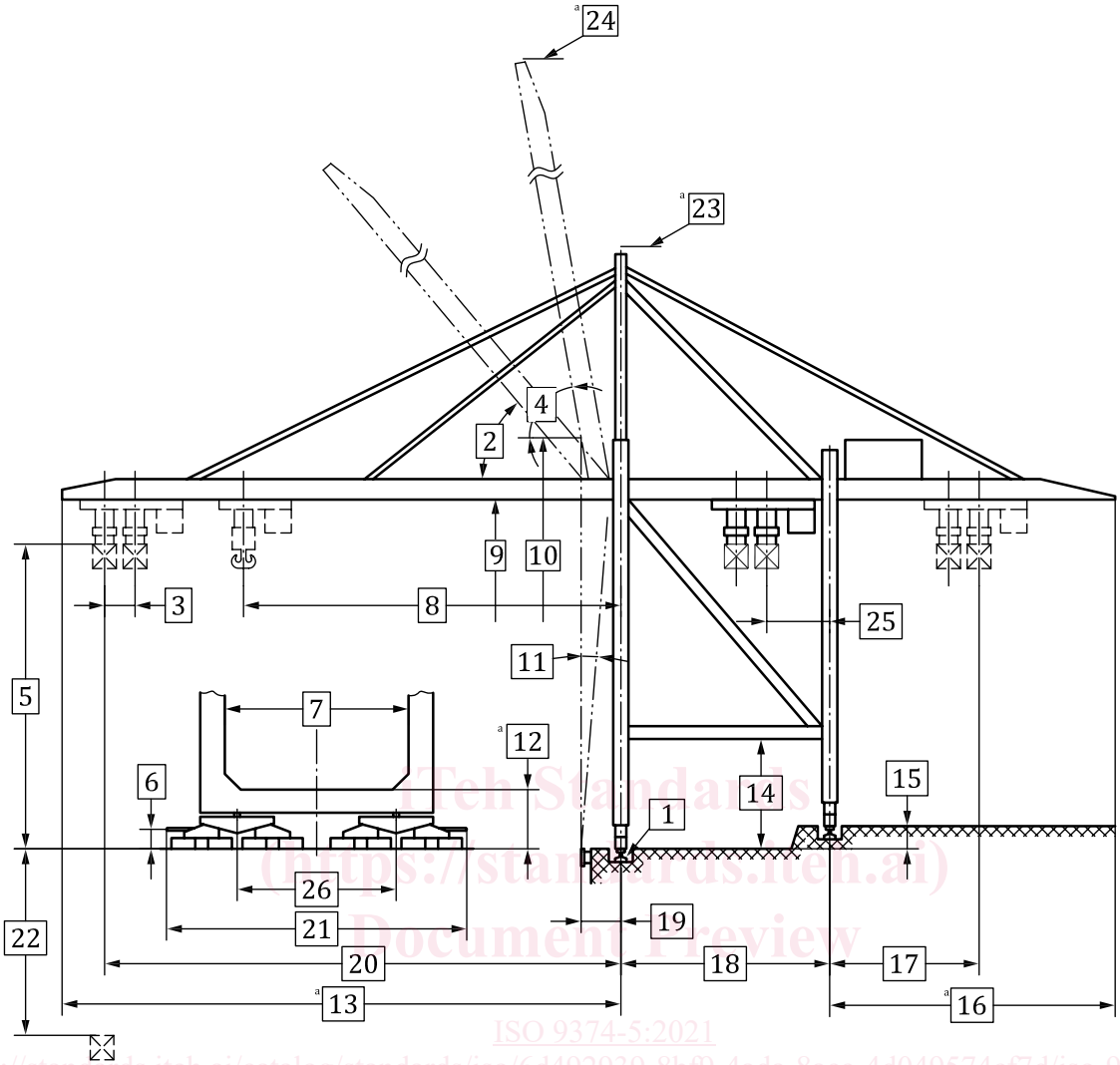
Figure 3 — Semi-portal bridge crane

The main differences between the various ship-to-shore cranes are as follows.

a) Figure 4: the dual (single) hoist ship-to-shore container crane should be capable of handling containers for loading onto or discharging from a container vessel. Two 40-ft (45-ft) or four 20-ft containers can be lifted together by the dual hoist crane. One 40-ft (45-ft) or two 20-ft containers can be lifted by the single hoist crane. On Figure 4 the dual hoist crane is drawn. There is no key 3 for the single hoist crane.

b) Figure 5: the double trolley ship-to-shore container crane should be capable of handling containers for loading onto or discharging from a container vessel. There are main trolley operating on the upper girder and auxiliary trolley operating on the portal beam.

c) Figure 6: the bridge type grab ship unloader should be capable of handling bulk material for discharging from a bulk cargo vessel.



Key

1 type of rail
2 luffing angle from operating position to stowed or vessel avoiding position
3 distance between two spreaders
4 luffing angle from operating position to stowed or maintenance position
5 load-lifting height above waterside rail top
6 buffer height
7 clearance between the legs
8 outreach for cargo beam
9 clearance under boom down position
10 clearance under boom up position
11 maximum vessel inclination angle
12 height of the sill beam
13 distance from the top of the boom to waterside rail centre
14 clearance under portal
15 rail height difference
16 distance from the end of the girder to landside rail
17 backreach
18 span
19 distance from the fender to waterside rail
20 outreach for spreader
21 buffer to buffer (buffer uncompressed)
22 load-lowering height below waterside rail top
23 maximum height to the top of pylon
24 maximum height to the top of the boom (boom up)
25 trolley parking position
26 crane wheel base
a Maximum, if restricted.

Figure 4 — Dual (single) hoist ship-to-shore container crane