INTERNATIONAL STANDARD

ISO 9374-5

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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

Reference number
ISO 9374-5 : 1991 (E)

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 9374-5 was prepared by Technical Committee ISO/TC 96, *Cranes*, Sub-Committee SC 9, *Bridge and gantry cranes*.

ISO 9374 will consist of the following parts, under the general title *Cranes — Information to be provided*:

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

Annex A forms an integral part of this part of ISO 9374.

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Cranes — Information to be provided —

Part 5:
Overhead travelling cranes and portal bridge cranes

1 Scope

This part of ISO 9374 specifies information to be provided

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

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

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this part of ISO 9374. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this part of ISO 9374 are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 7363 : 1986, *Cranes and lifting appliances — Technical characteristics and acceptance documents.*

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

The purchaser shall 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.

4 Information to be provided by the manufacturer

4.1 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 shall include details of routine servicing, inspection and maintenance of the crane;

c) erection information, when requested.

4.2 Dimensions

The manufacturer shall provide general arrangement drawings, with dimensions, showing that the purchaser's requirements, including the restrictions stated in figures 1 to 3, are met.

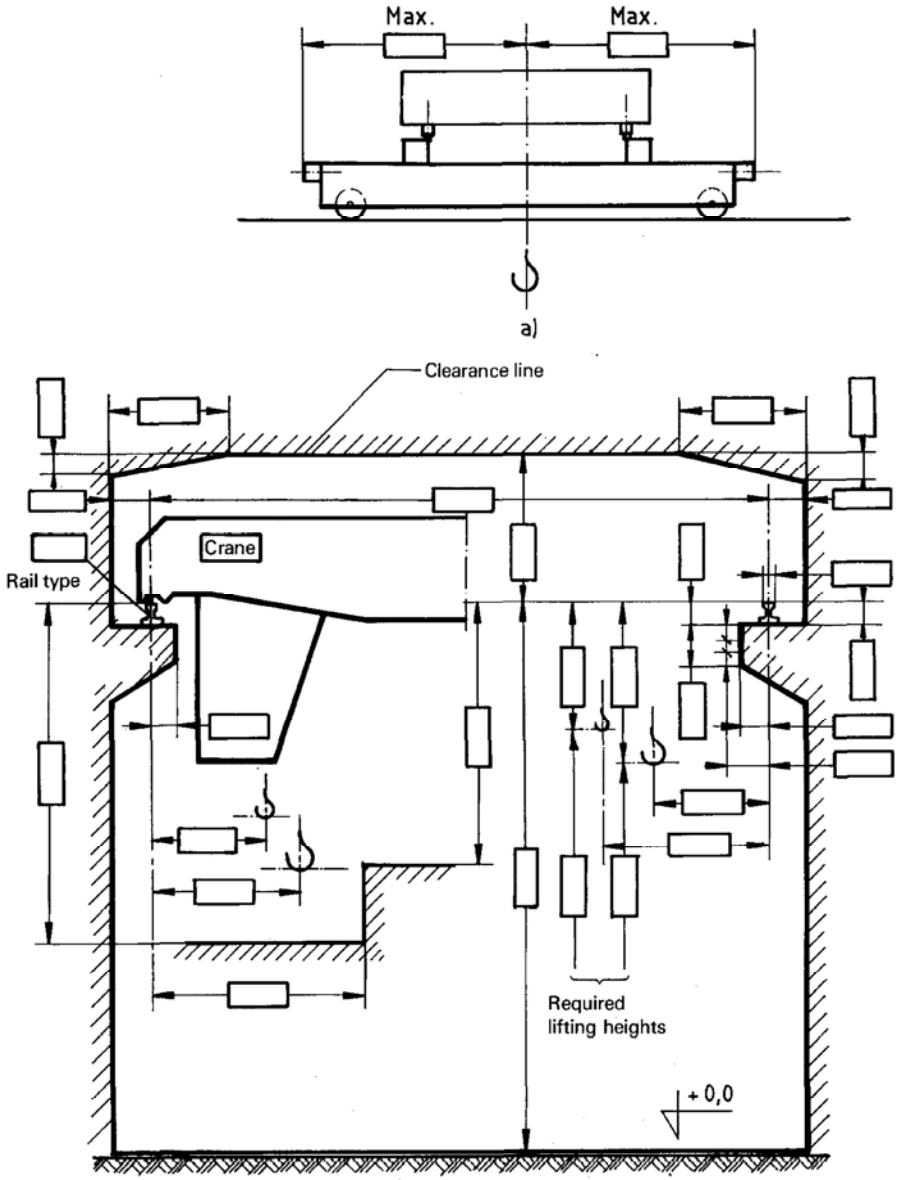
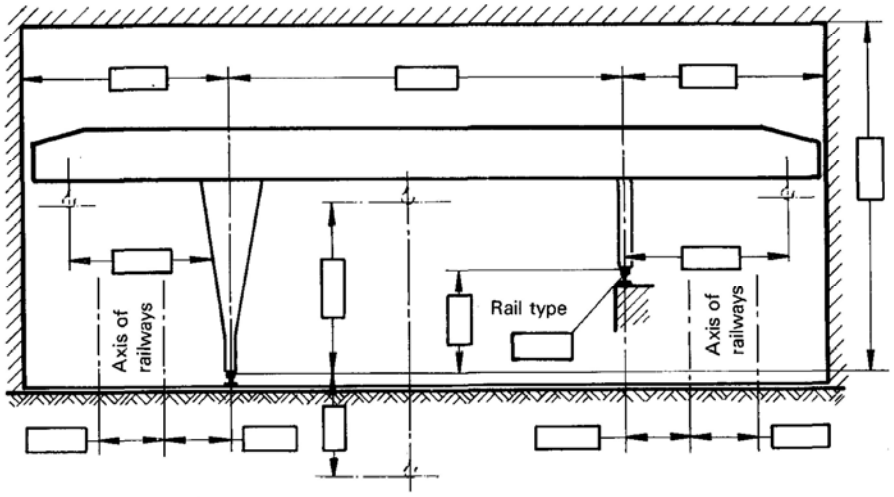
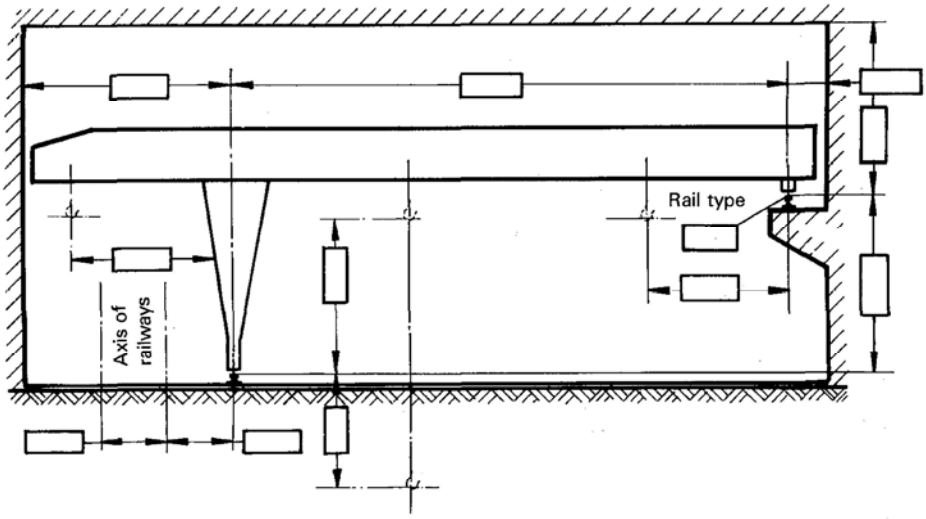


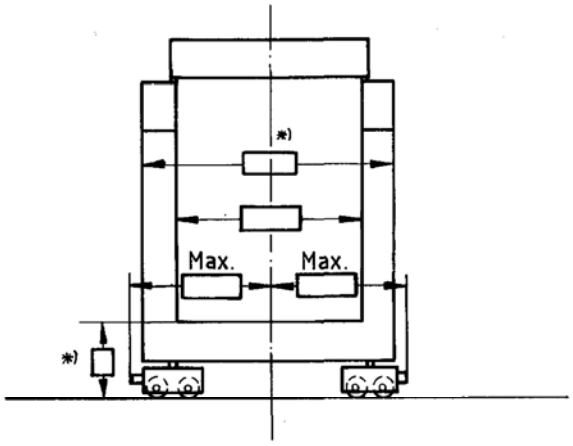
Figure 1 — Overhead travelling crane



a) Portal bridge crane



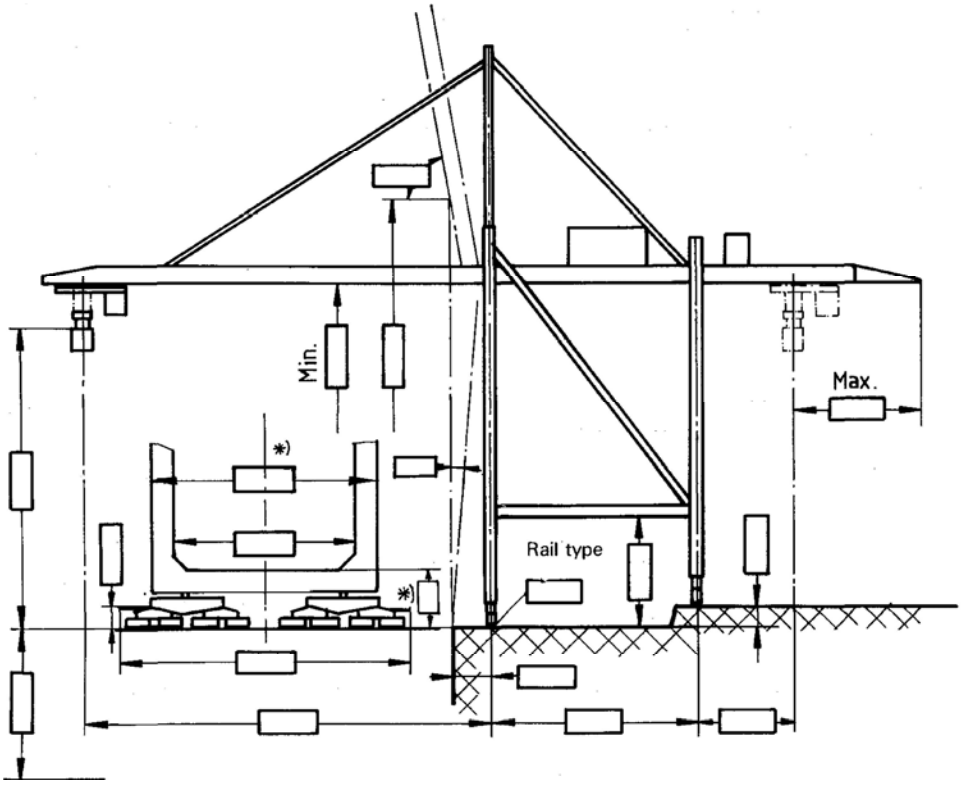
b) Semi-portal crane



c) End view

*) Max., if restricted.

Figure 2 — Portal bridge crane and semi-portal bridge crane



*) Max., if restricted.

Figure 3 — Typical ship-to-shore container crane

Annex A
(normative)

Format for information to be provided by the purchaser with the enquiry or order

Purchase enquiry or order form

Name of company: .....

Address: .....

Name of person who may be contacted: .....

Telephone number: .....

Telex number: .....

Telefax number: .....

Crane to be installed in: ..... (town) ..... (country)

Number of cranes required: .....

Required rated capacity (payload plus non-fixed lifting attachment)

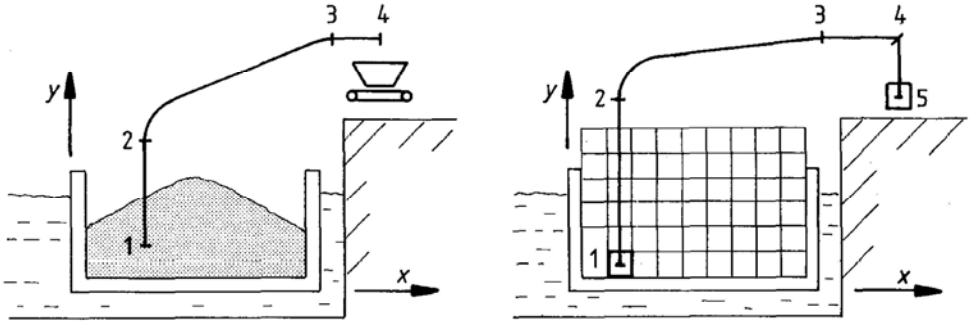
a) Main hoist: ..... t

b) Auxiliary hoist: ..... t

Throughput

a) Path of movements (coordinates)

i	1	2	3	4	5	
x_i						(m)
y_i						(m)



b) Time of one working cycle: ..... s

c) Number of working cycles per hour: ..... h^{-1}

d) Throughput with 100 % rated payload: ..... t/h

Span, centre-to-centre of gantry rail(s): ..... m

Description of type of crane and crab: .....

.....

Are platforms required on the bridge? .....

Position of access point(s): .....

Type of payload: .....

Material to be handled: .....

Specific weight of bulk material: ..... t/m^3

Type of hook or lifting device: .....

Operating speeds

	Nominal speed	Slow or creep speed (if required)	Maximum speed with reduced load (if required)
Main hoist:	..... m/min	..... m/min	..... m/min
Auxiliary hoist:	..... m/min	..... m/min	..... m/min
Traverse:	..... m/min	..... m/min	..... m/min
Travel:	..... m/min	..... m/min	..... m/min

Use of crane and its mechanisms

a) Where detailed information is available about the operations that the appliance is expected to perform and the individual loads to be carried at each stage of the operations, it should be provided as follows.

Utilization:

1) Main hoist

Average lift: ..... m

Average number of lifts per hour: .....

2) Auxiliary hoist

Average lift: ..... m

Average number of lifts per hour: .....

3) Traverse

Average movement: ..... m

Average number of moves per hour: .....

4) Travel

Average movement: ..... m

Average number of moves per hour: .....

Crane operating hours per day: .....

or per month: .....

If the operation of a movement of the crane is not evenly distributed over the day or over the hour, indicate the maximum rate of lifts: .....

Payloads:

1) Percentage of lifts with approximately full load: .....

2) Percentage of lifts with approximately 75 % load: .....

3) Percentage of lifts with approximately 50 % load: .....

4) Percentage of lifts with approximately 25 % load: .....

Weight of the non-fixed lifting attachment ..... t

Intended design life: ..... years

b) Where insufficient information is available about the operations that the appliance is expected to perform, the purchaser should request the manufacturer to recommend the most suitable classification for the appliance as a whole and each mechanism for the anticipated duty.

State any special environmental conditions (for example, humidity, wind): .....

Air temperature conditions

a) ambient: ..... °C

b) maximum: ..... °C

c) minimum: ..... °C

Crane is situated: indoors ☐, under shelter ☐, or outdoors ☐

For outdoor cranes, a layout drawing of the site with the points of the compass is required.

Special service conditions

Specify any special conditions that apply, such as:

a) handling molten metal;

b) use in hazardous gases, vapours, solids or volatile liquids;

c) use in mines and quarries;

d) use for processes such as galvanizing, pickling and hot dipping;

e) use in saline atmospheres, where the degree of exposure shall be stated;

f) the presence of any local heat sources such as furnaces or radiant space heating panels;

g) the need for special precautions against termites;

h) any physical obstructions not apparent from the dimensions provided for clearances (see figures 1 to 3);

i) in the case of pedestrian-controlled cranes, any differences in the operating floor level;

j) any variation in electrical supply greater than ± 6 % on nominal voltage;

k) any particular requirements concerning headroom above servicing platforms and if the crane servicing platforms are to be used for other activities. The need, if any, for fine mesh screen to prevent the dropping of articles from the servicing areas;

l) limitations in use of radio control;

m) any other conditions.

Type of rails: .....

Allowable wheel loading: ..... kN

Allowable load per metre of rail: ..... kN/m

Controls

Control is:

a) from cabin ☐

b) by pendants ☐

c) radio ☐

d) remote ☐

e) other ☐ (specify)

If a):

Position on crab: .....

or, independently movable, on bridge: .....

or fixed on bridge (position to be given): .....

Type of cabin: open .....

closed .....

Special features: .....

If b):

From fixed point on bridge: .....

From crab: .....

Mobile on separate track: .....

Any special control requirements: .....

.....

Power supply system

a) Cable drum ☐, current collector system ☐ or festoon cable ☐

b) Power supply: existing ☐, or new system required ☐

c) Length of cable: ..... m

d) Position description: .....

Power supply

a) Voltage: V

b) Phases: .....

c) Frequency: ..... Hz

d) Conductors: .....

e) Is there a neutral? .....

f) Earthing system: .....

Limiting devices

State requirements: .....

.....

.....

Any special requirements, statutory or technical: .....

.....

.....

.....

Are there any other cranes on the track? .....

.....

If so, advise if:

a) devices are required to prevent collision of the cranes or their loads: .....

b) provision is to be made for cranes to be separated by a minimum distance in order not to overstress the track or bridge structure: .....

c) there are any other cranes in the vicinity: .....

.....

Clearances and dimensions (for example see figures 1 to 3). This information is indicative only and should be checked by the manufacturer.

UDC 621.874/.875 : (083.13)

Descriptors : handling equipment, lifting equipment, cranes (hoists), travelling cranes, portal bridge cranes, technical documents.

Price based on 8 pages