International Standard

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Second edition
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Cranes — Information to be provided —

Part 4: Jib cranes

Appareils de levage à charge suspendue — Informations à fournir —

Partie 4: Grues à flèche

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Foreword

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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 document 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).

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This document was prepared by Technical Committee ISO/TC 96, *Cranes*, Subcommittee SC 8, *Jib cranes*.

This second edition cancels and replaces the first edition (ISO 9374-4:1989), which has been technically revised.

The main changes are as follows:

— Clause 3 has been added;

— Figures 1 to 3 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 4: Jib cranes

1 Scope

This document specifies information to be provided by:

a) a purchaser in enquiring about or ordering a jib crane;

b) a manufacturer in tendering for or supplying a jib 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 4306-1, *Cranes — Vocabulary — Part 1: General*

ISO 4306-4, *Cranes — Vocabulary — Part 4: Jib cranes*

ISO 9374-1, *Cranes — Information to be provided — Part 1: General*

ISO 8686-4, *Cranes — Design principles for loads and load combinations — Part 4: Jib cranes*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4306-1 and ISO 4306-4 apply.

ISO and IEC maintain terminology 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 jib 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:

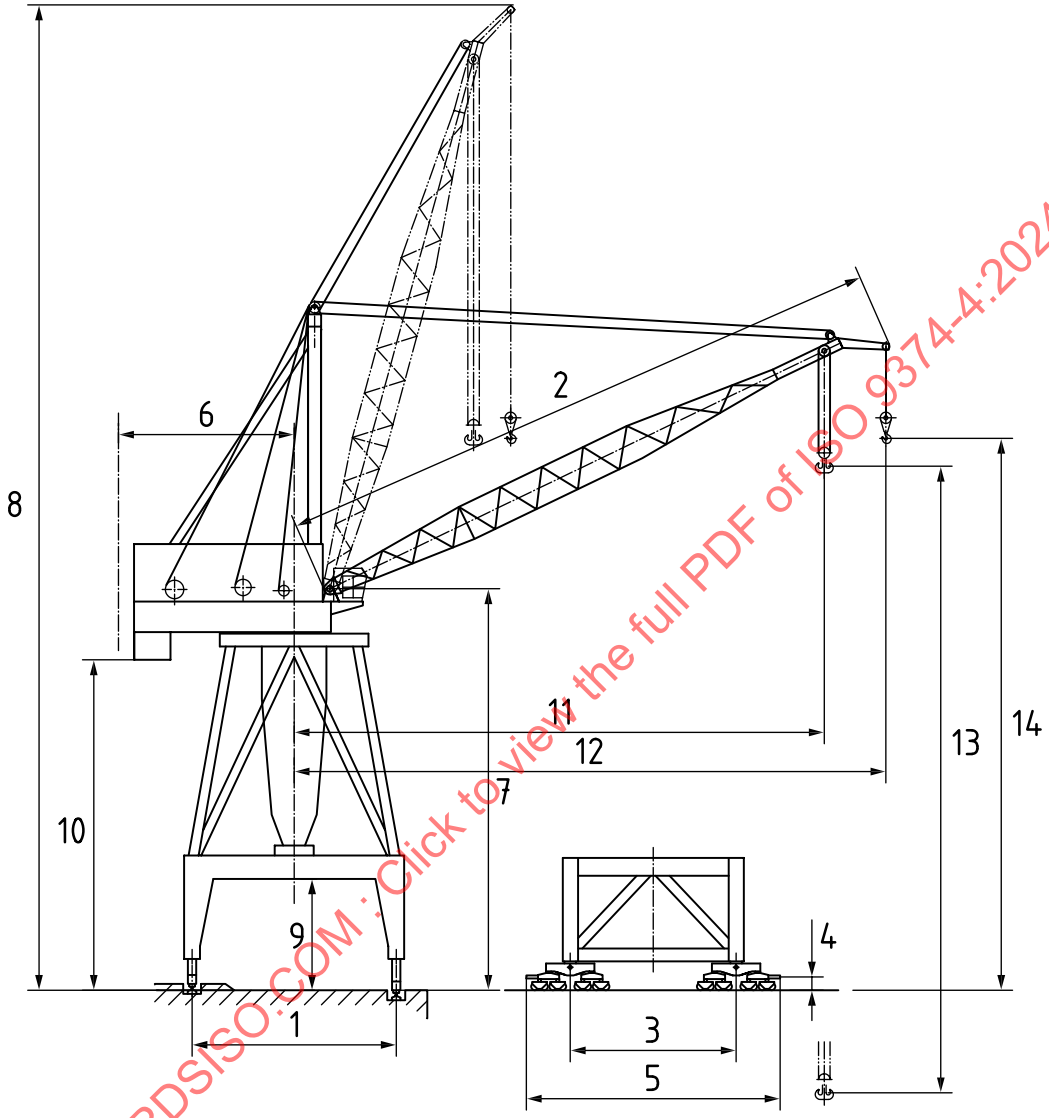
a) the information provided by the manufacturer in accordance with ISO 9374-1;

b) erection information, when requested.

The manufacturer shall supply all loads applied by the crane in accordance with ISO 8686-4.

5.2 Dimensions

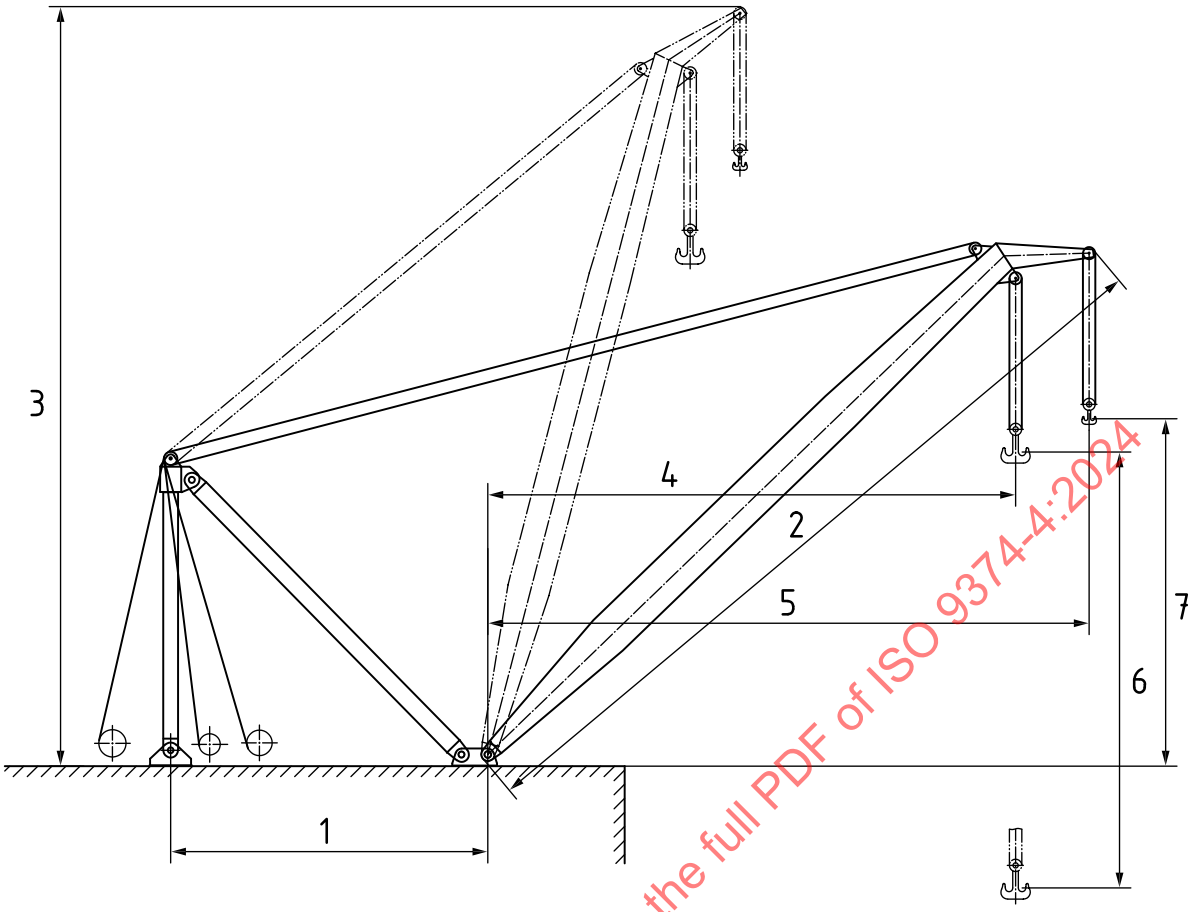
The manufacturer shall provide the necessary dimensions to install and use the crane. Figures 1 to 3 show examples of drawings with minimum dimensions.



Key

1	span	8	clearance height of boom
2	boom length	9	clearance under portal
3	crane wheel base	10	clearance under rotating platform
4	buffer height	11	working radius range for main hook
5	buffer to buffer (buffer uncompressed)	12	working radius range for auxiliary hook
6	tailswing radius	13	hook height range for main hook
7	boom hinge elevation above rail	14	hook height range for auxiliary hook

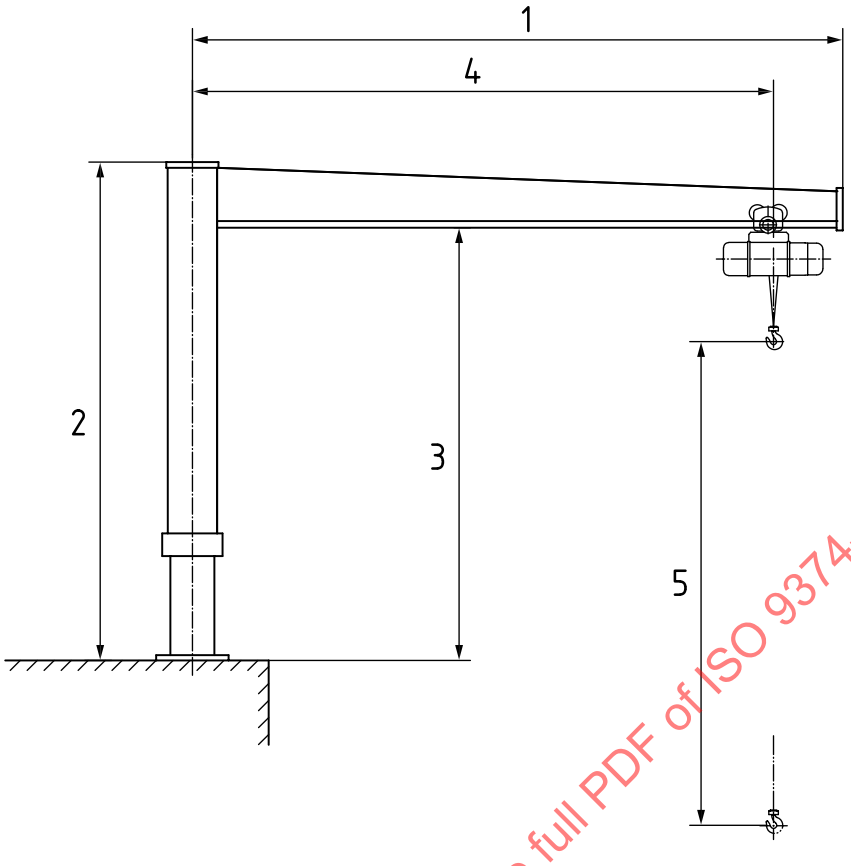
Figure 1 — Examples of dimensions for portal or semi-portal slewing crane with single boom



Key

1	distance from boom hinge to mast leg	5	working radius range for auxiliary hook
2	boom length	6	hook height range for main hook
3	clearance height of boom	7	hook height range for auxiliary hook
4	working radius range for main hook		

Figure 2 — Examples of dimensions for derrick crane



Key

1	cantilever length	4	working radius range
2	clearance height of crane	5	hook height range
3	clearance under cantilever		

Figure 3 — Examples of dimensions for cantilever crane

Annex A
(informative)

Sample format and information to be provided by the purchaser with the enquiry or order

See Tables A.1 to A.6.

Table A.1 — Common information to be provided by the purchaser

Purchase enquiry or order form			
Short description of works:			
Required rated capacity (payload plus non-fixed lifting attachment)			
All required rated capacities should be indicated as follows:			
a) Main hoist:			
Maximum capacity and radius:	t (load) at	m (radius)	
Maximum radius and capacity:	m (radius) at	t (load)	
b) Auxiliary hoist (if required):			
Maximum capacity and radius:	t (load) at	m (radius)	
Maximum radius and capacity:	m (radius) at	t (load)	
Required dimension			
Load-lifting height:			m
Load-lowering depth:			m
Maximum radius:			m
Minimum radius:			m
Slewing range (only for slewing crane):			°
Maximum allowable tailswing radius (only for slewing crane):			m
Distance of travelling (only for travelling crane):			m
Maximum overall height of crane (if required):			m
Clearance below boom (if required):	m at radius		m

Table A.1 *(continued)*

Load-lifting attachment			
☐ hook	☐ grab	☐ container spreader	
☐ magnet	☐ other, describe further		
Special speed requirements			
Operating speeds	**Nominal speed (rated load)**	**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
Luffing (if required):	..... m/min	..... m/min	..... m/min
Traverse (if required):	..... m/min	..... m/min	..... m/min
Slewing (if required):	..... rpm	..... rpm	..... rpm
Travel:	..... m/min	..... m/min	..... m/min
Any special requirements:			
.....			
.....			
.....			
.....			
.....			

Table A.1 *(continued)*

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 provide the detailed usage of the machine.

b) Alternatively, the crane should be classified according to ISO 4301-1 and ISO 4301-4, as follows:

1) Classification of crane as a whole:

— Class of utilisation:

— State of loading:

— Group classification:

— Group classification of mechanisms:

Mechanism	Class of utilisation [a]	Load spectrum [a]	Classification [a]	Average displacements [b]
Main Hoisting				
Auxiliary hoisting				
Luffing				
Slewing				
Traversing				
Travelling				
[a] If various load-lifting attachments are used on the crane, such as hook, grab, magnet or container spreader, the hoisting group classification should be provided respectively according to the load-lifting attachment.				[b] classification parameter in ISO 4301-1 only

Intended design life: ..... years

c) 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.

Table A.1 *(continued)*

Special environmental conditions				
a)	Humidity:			
b)	The in service wind speed:			m/s
c)	The out of service wind speed:			m/s
d)	Earthquake loads:			
e)	Air temperature conditions:			
1)	ambient:			°C
2)	maximum:			°C
3)	minimum:			°C
f)	Crane is situated:	☐ outdoor	☐ under shelter	
		☐ indoor		
g)	Any special requirements:			
Special service conditions				
Specify any special conditions that apply, such as:				

Table A.1 *(continued)*

Controls

Control is:

a) ☐ local

b) ☐ remote

c) ☐ other

If a):

Position: ☐ fixed on crane ☐ fixed on trolley ☐ separate out of crane

Type of cabin: ☐ open ☐ closed

Special features: .....

If b):

From fixed point on: .....

From trolley: .....

Mobile on separate track: .....

Any special control requirements: .....

Power supply system

a) Description of power supply system for the crane:

.....

b) Position description:

.....

c) Any special requirements:

.....

Table A.1 *(continued)*

Power supply		
a)	Voltage:	V
b)	Phases:	
c)	Frequency:	Hz
d)	Conductors:	
e)	Is there a neutral?:	
f)	Earthing system:	
g)	Short-circuit capacity at supply point:	
h)	Any special requirements:	

Table A.1 *(continued)*

Special limiting devices

State requirements:

.....

.....

.....

.....

.....

.....

Any special requirements:

.....

.....

.....

.....

.....

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 crane structure:

.....

.....

c) there are any other cranes in the vicinity:

.....

.....

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

Except for the restrictions that are already indicated above, the other special requirements should be provided by the purchaser.

If there are no more special requirements from the purchaser, the crane shall be designed and manufactured according to the experience of the manufacturer or be negotiated by the purchaser and the manufacturer.

If there is any query from the purchaser, the manufacturer should be consulted.

Table A.2 — Special information for portal or semi-portal slewing crane

a)	Span:	m
b)	Rail height difference:	m
c)	Clearance under portal:	m
d)	Buffer to buffer:	m
e)	If electro-magnet handling crane is enquired or ordered, the following information should be provided:	
	Steel cargo type:	
	Each steel cargo size:	
	Each steel cargo weight:	
	Each lift quantity:	
	Other character or requirements:	

Rail information

For rail-mounted crane, the following rail information shall be provided:

a) Type of rails:

b) Allowable load:

Load type	In service wind	Out of service wind	Unit
Allowable wheel loading			kN
Allowable load per m of rail			kN/m

Table A.3 — Special information for high mast crane

a)	Crane type:	☐ rail mounted	☐ rubber-tyred	
b)	If a rail mounted crane is enquired or ordered, provide:			
	Track centre (centre-to-centre of rails):			m
c)	If a rail rubber-tyred crane is enquired or ordered, provide:			
	Ground allowable press of servicing area and passway:			kN/m^2
The other information can refer to Tables A.1 and A.2.				