INTERNATIONAL STANDARD

ISO 4306-4

First edition
2020-10

Cranes — Vocabulary —

Part 4: Jib cranes

Appareils de levage à charge suspendue — Vocabulaire —

Partie 4: Grues à flèche

Reference number
ISO 4306-4:2020(E)

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword ..... **iv**
1 Scope **1**
2 Normative reference **1**
3 Terms and definitions **1**
Annex A (informative) **Types of jib cranes** **17**
Bibliography **18**

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 8, *Jib cranes*.

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.

A list of all parts in the ISO 4306 series can be found on the ISO website.

Cranes — Vocabulary —

Part 4: Jib cranes

1 Scope

The ISO 4306 series establishes a vocabulary of the most commonly used terms in the field of cranes.

This document defines the terms related to jib type cranes.

Mobile cranes, tower cranes, railway cranes, and offshore cranes are excluded.

Annex A contains a diagram showing the different types of jib cranes.

2 Normative reference

There are no normative references in this document.

3 Terms and definitions

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

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

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

3.1
portal slewing crane
travelling slewing crane mounted on a portal allowing or not allowing railcars, vehicles and equipment to pass under it

3.2
single-boom portal slewing crane
portal slewing crane (3.1) with a single boom pinned to the front of the rotating platform at its inner end and suspending load-handling device at its outer end, and of which load-handling device can move along nearly horizontal path by means of compensation methods during boom luffing

Note 1 to entry: See Figure 1.

3.3
double link boom portal slewing crane
portal slewing crane (3.1) with a boom system consisting of boom, fly jib and tension bar, and of which the outer end of the fly jib can remain at a nearly constant height and the load-handling device moves along nearly horizontal path during boom luffing

Note 1 to entry: See Figure 2.

3.4
portal slewing crane with slewing ring
portal slewing crane (3.1) with a slewing ring mounted between rotating platform and cylinder, and of which the vertical load, horizontal load and moment are borne by the slewing ring

Note 1 to entry: See Figure 2.

3.5
portal slewing crane with rotary column
portal slewing crane (3.1) with a rotary column connected to the rotating platform and supported on the portal by roller wheels and bearings

Note 1 to entry: See Figure 1.

3.6
kangaroo portal slewing crane
portal slewing crane (3.1) with a grab and a hopper to handle bulk cargo

Note 1 to entry: See Figure 3.

3.7
container handling portal slewing crane
portal slewing crane (3.1) equipped with a spreader for handling containers

Note 1 to entry: See Figure 4.

3.8
portal slewing crane for multipurpose use
portal slewing crane (3.1) equipped with a spreader and changeable hook and/or grab, handling various containers, general cargo and/or bulk cargo

Note 1 to entry: See Figure 5.

3.9
semi-portal slewing crane
travelling slewing crane with a portal mounted on a rail track directly at one end and by legs at the other end, allowing railcars, vehicles and equipment to pass under it

Note 1 to entry: See Figure 6.

3.10
high mast crane
jib crane with a tower pillar which has the lower hinge point of the single boom on the tower pillar and uses a hook or grab to handle articles, including rail-mounted high mast crane and rubber tyred high mast crane

Note 1 to entry: See Figure 7 and Figure 8.

3.11
fixed-base jib crane
jib crane fixed on a foundation or on any other stationary base

Note 1 to entry: See Figure 9.

3.12
derrick crane
mast crane
crane consisting of a mast or equivalent member held at the end by a guy or braces, with or without a boom and/or slewing mechanism, for use with a hoisting mechanism and operating ropes

3.13
fixed-base derrick crane
derrick crane (3.12) fixed on a foundation or on any other stationary base

3.14
A-frame derrick crane
fixed-base derrick crane (3.13) with a boom which can swing around the hinge at the bottom under the control of a hauling rope (or other driving devices)

Note 1 to entry: See Figure 10.

3.15
shear-leg derrick crane
fixed-base derrick crane (3.13) with a boom which can operate luffing movement in front of the shear leg mast

Note 1 to entry: See Figure 11.

3.16
gin pole derrick crane
fixed-base derrick crane (3.13) with a mast that can serve as a jib

Note 1 to entry: See Figure 12.

3.17
chicago boom derrick crane
fixed-base derrick crane (3.13) taking the vertical member of buildings as its mast

Note 1 to entry: See Figure 13.

3.18
movable derrick crane
derrick crane (3.12) with a moving undercarriage

Note 1 to entry: See Figure 14.

3.19
cantilever crane with fixed pillar
pillar jib crane with a cantilever which can rotate on a pillar fixed at its base to a foundation

Note 1 to entry: See Figure 15.

3.20
cantilever crane with rotary pillar
pillar jib crane with a cantilever which is secured to a pillar which can rotate in a support socket in its foundation

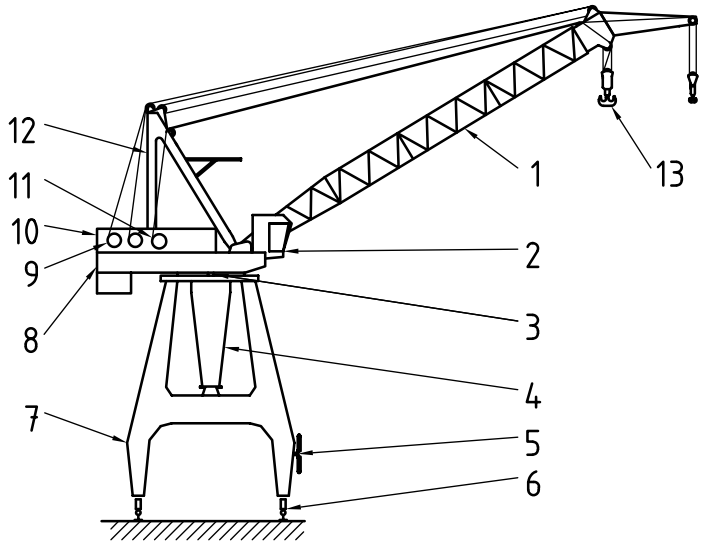
Note 1 to entry: See Figure 16.

3.21
wall fixed crane
wall crane capable of rotating in a supported socket secured to a wall or bearing structure

Note 1 to entry: See Figure 17.

3.22
wall travelling crane
wall crane capable of travelling on elevated tracks secured to a wall or bearing structure

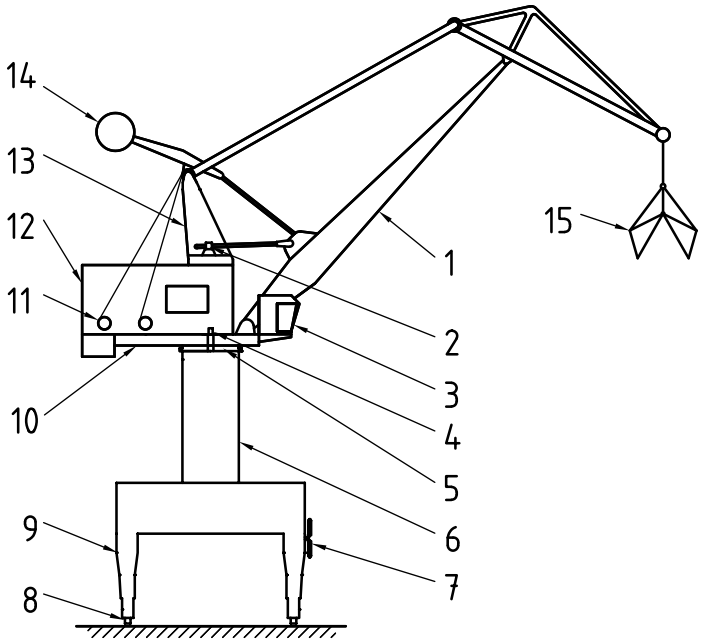
Note 1 to entry: See Figure 18.



Key

1	single boom	8	rotating platform
2	cabin	9	luffing mechanism
3	slewing mechanism	10	machine house
4	rotary column	11	hoisting mechanism
5	crane cable reel device	12	A-frame
6	travelling mechanism	13	hook
7	portal		

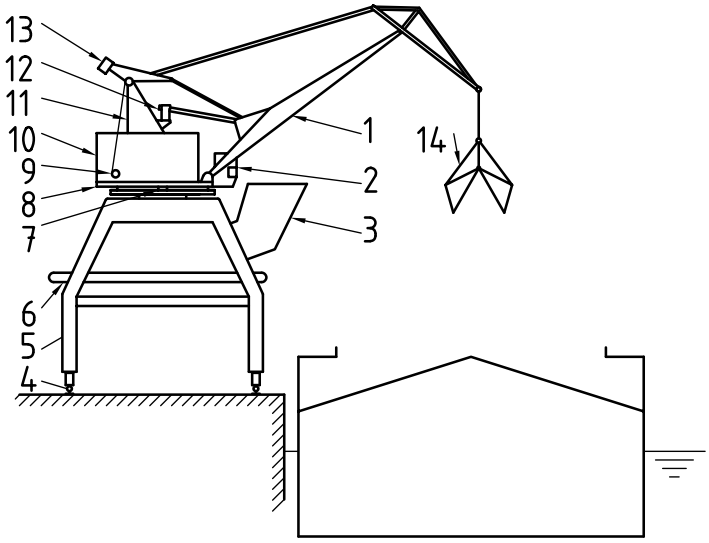
Figure 1 — Example of single-boom portal slewing crane (with rotary column)



Key

1	boom system	9	portal
2	luffing mechanism	10	rotating platform
3	cabin	11	hoisting mechanism
4	slewing mechanism	12	machine house
5	slewing ring	13	upper frame
6	cylinder	14	boom balancing system
7	crane cable reel device	15	grab
8	travelling mechanism		

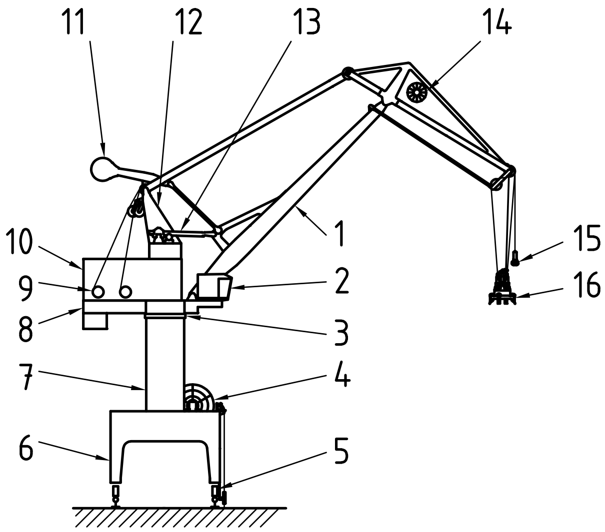
Figure 2 — Example of double link boom portal slewing crane (with slewing ring)



Key

1	boom system	8	rotating platform
2	cabin	9	hoisting mechanism
3	hopper	10	machine house
4	travelling mechanism	11	upper frame
5	portal	12	luffing mechanism
6	belt conveyor	13	boom balancing system
7	slewing mechanism	14	grab

Figure 3 — Example of kangaroo portal slewing crane



Key

1 boom system
2 cabin
3 slewing mechanism
4 crane cable reel device
5 travelling mechanism
6 portal
7 cylinder
8 rotating platform
9 hoisting mechanism
10 machine house
11 boom balancing system
12 upper frame
13 luffing mechanism
14 spreader cable reel device
15 hook
16 spreader

Figure 4 — Example of container handling portal slewing crane