
International Standard



4301/2

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Lifting appliances — Classification — Part 2: Mobile cranes

Appareils de levage — Classification — Partie 2: Grues mobiles

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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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 4301/2 was prepared by Technical Committee ISO/TC 96, *Cranes, lifting appliances and related equipment*.

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Lifting appliances — Classification — Part 2: Mobile cranes

0 Introduction

This part of ISO 4301 is one of a series covering classification of cranes. Other parts in the series will be as follows:

Part 1: General.

NOTE — Part 1 will be a revision of the existing ISO 4301.

Part 3: Tower cranes.

Part 4: Portal and pedestal cranes.

Part 5: Overhead travelling and gantry cranes.

It applies to basic types of self-propelled mobile cranes and their parts as defined in ISO 4306/2.

2 References

ISO 4301, *Lifting appliances — Classification*.

ISO 4306/2, *Lifting appliances — Vocabulary — Part 2: Mobile cranes*.

ISO 4308, *Cranes — Selection of wire ropes*.

1 Scope and field of application

This part of ISO 4301 establishes a classification of mobile cranes and related crane mechanisms based on the number of operating cycles to be carried out during the expected life of the mobile crane or mechanism and on a load spectrum factor which represents a nominal state of loading.

3 Classification

The group classifications of a mobile crane and its mechanism are based on the operating (service) conditions given in table 1.

Table 1 — Mobile crane group classification *

Crane operating conditions	Group
Cranes for general hook duties, not used for continuous service	A1
Crane equipped with bucket, grapple or magnet	A3
Heavy duty, for example container handling or general dock service	A4

* See also table 3 of ISO 4301, which gives the related series of Q (state of loading) and U (class of utilization) factors.

4 Mechanism group classification

The group classifications of mechanisms of mobile cranes are shown in table 2.

Table 2 — Mechanism group classification (see notes)

Action	Crane operating conditions		
	A1	A3	A4
Hoist	M3	M4	M5
Slew	M2	M3	M4
Luff	M2	M3	M3
Telescope	M1	M2	M1*
Travel (at work site only):			
wheel mounted	M1	M1	M1
crawler mounted	M1	M2	M2

* The telescoping function is not performed with a suspended load.

NOTES

- 1 See table 6 of ISO 4301.
- 2 For M1, M2, M3, M4 and M5, the related series of L (state of loading) and T (class of utilization) factors as stated in table 6 of ISO 4301 apply.
- 3 The classifications presented do not relate to the Z_p values for ropes and h values for drum and sheave ratio. (See ISO 4308.)

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