

# इंटरनेट

# मानक

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IS 13834-2 (1993): Cranes - Classification, Part 2: Mobile cranes [MED 14: Cranes, Lifting Chains and Related Equipment]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



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भारतीय मानक  
क्रेन — वर्गीकरण

भाग 2 चलक्रेन

*Indian Standard*

**CRANES — CLASSIFICATION**

**PART 2 MOBILE CRANES**

UDC 621'873'2/'3

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**BUREAU OF INDIAN STANDARDS**  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002

NATIONAL FOREWORD

This Indian Standard which is identical with ISO 4301-2 : 1985 'Lifting appliances — Classification — Part 2 : Mobile cranes' issued by International Organization for Standardization ( ISO ) was adopted by the Bureau of Indian Standards on the recommendations of Cranes, Lifting Chains and Its Related Equipment Sectional Committee and approval of the Heavy Mechanical Engineering Division Council.

This standard is being published in five parts. Other parts of this standard are as follows:

- Part 1 General
- Part 3 Tower cranes
- Part 4 Jib cranes
- Part 5 Overhead travelling and portal bridge cranes

The text of ISO standard has been approved for publication as Indian Standard without deviations. Certain terminology and conventions are however not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
- b) Comma ( , ) has been used as a decimal marker while in Indian Standards, the current practice is to use a point ( . ) as a decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards which are to be substituted in their place are listed below along with their degree of equivalence for the editions indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 4301-1 : 1986	IS 13834 ( Part 1 ) : 1993 Cranes — Classification : Part 1 General	Identical
ISO 4306-2 : 1985	IS 13473 ( Part 2 ) : 1992 Cranes — Vocabulary : Part 2 Mobile cranes	Identical
ISO 4308-1 : 1986	IS 13870 ( Part 1 ) : 1993 Cranes and lifting appliances — Selection of wire ropes : Part 1 General ( <i>under print</i> )	Identical
ISO 4308-2 : 1986	IS 13870 ( Part 2 ) : 1993 Cranes and lifting appliances — Selection of wire ropes : Part 2 General ( <i>under print</i> )	Identical

TEXTUAL ERROR

When adopting the text of the International Standard, the textual error given below was discovered. It has been marked in text.

<i>Reference to error</i>	<i>Text to be Modified</i>	<i>Modified Text</i>
Page 1 Clause 0 Para 3	— Part 4 Portal and pedestal cranes	— Part 4 Jib cranes

# *Indian Standard*

## CRANES — 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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Doc : No. HMD 14 ( 0119 )

#### Amendments Issued Since Publication

Amend No.	Date of Issue	*Text Affected

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