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**Cranes — Crane operating manual —**

**Part 1:  
General**

*Appareils de levage à charge suspendue — Manuel à l'usage des  
opérateurs —*

*Partie 1: Généralités*

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ISO copyright office  
Ch. de Blandonnet 8 • CP 401  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
copyright@iso.org  
www.iso.org

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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. 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](http://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](http://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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: [Foreword — Supplementary information](#).

The committee responsible for this document is ISO/TC 96, *Cranes*, Subcommittee SC 5, *Use, operation and maintenance*.

This second edition cancels and replaces the first edition (ISO 9928-1:1990), of which it constitutes a minor revision. Notably, *driving* has been replaced by *operating* in the title and “driving”/“driver” by “operation/operator” throughout the text.

ISO 9928 consists of the following parts, under the general title *Cranes — Crane operating manual*:

- *Part 1: General*
- *Part 2: Mobile cranes*

# Cranes — Crane operating manual —

## Part 1: General

### 1 Scope

This part of ISO 9928 specifies general requirements for the contents of a crane operating manual.

### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4306 (all parts), *Cranes — Vocabulary*

ISO 80000-1, *Quantities and units — Part 1: General*

ISO 80000-4, *Quantities and units — Part 4: Mechanics*

### 3 Terms and definitions

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

#### 3.1

##### **crane operator**

person who operates the crane for the purpose of positioning loads

Note 1 to entry: The term *driver* is then used to refer to that person who operates only those controls which move the crane from place to place.

### 4 Presentation of the manual

#### 4.1 General

A manual shall be provided by the manufacturer which

- a) should be simple to understand and have adequate explanatory notes,
- b) shall incorporate the use of internationally recognized symbols,
- c) should be easy to use, compact and made of durable hardwearing material, and
- d) shall be compiled in the language agreed between the parties to the contract.

The presentation of the manual is important. It is a working tool which should be both convenient and complete. The text should be simple and adapted to the individuals who will use it, with all information being explicit and comprehensive.

Illustrations, diagrams, graphs and tables should be used with the purpose of avoiding risk of misunderstanding and in preference to written text. They should be clear, simple and be placed adjacent to the corresponding reference.

The terms and definitions (see ISO 4306), and the units and symbols (see ISO 80000-1 and ISO 80000-4) shall comply with the relevant International Standards. When the units specified on the equipment are different from those in common use, reference should be made in brackets or by means of a footnote.

Only those items relative to the particular crane and its application shall be included.

### 4.2 Preliminary information

The following information shall be given on the front or back cover, or on the first pages of the manual:

- a) the title of the manual;
- b) the reference number of the manual (if any);
- c) the designation (type) of the crane;
- d) the type or series of crane (if any);
- e) the serial number or numbers of the crane or, where appropriate, the range of serial numbers covered;
- f) the name and full address of the manufacturer and/or agent;
- g) a table of contents;
- h) an index (optional);
- i) the basic characteristics of the crane.

### 4.3 Number of books

The crane operating manual, along with other crane manuals (maintenance manual, user manual, etc.), may be published as one or more books. The choice of the size and grouping of the books should be suitable for the type of product, its normal application and personnel requirements. Where appropriate, cross-reference to other parts of the book should be made so that the same information is not repeated unnecessarily.

## 5 Contents of the operating manual

### 5.1 Technical data

The manual shall include

- a) a drawing/sketch of the crane assembly with the number and designation of the main components;
- b) all technical data of importance for the operator to ensure safe transport, erection and dismantling, etc. of the crane.

### 5.2 Special safety advice

The manual shall contain applicable safety advice, together with the appropriate safety symbol. Typical examples are given in [5.2.1](#) to [5.2.5](#).

#### 5.2.1 Crane

“Switches and connectors shall not be opened until the power supply has been switched off.”

“Do not use the emergency stop device in order to stop normal motion.”

### 5.2.2 Operating area

“Install fencing to prevent unauthorized people from entering the operating area of an automatically operated crane.”

### 5.2.3 Setting up of the crane

“Do not use the crane before the outriggers are in position.”

### 5.2.4 Securing of the crane

“Set the wheel brakes and ground anchors.”

### 5.2.5 Working clothes and personal equipment

“Always use a safety rope when working on the structure of the crane.”

## 5.3 Operator’s aids and controls

The manual shall include a drawing/sketch of instruments, indicators, controls and diagnostic modules seen from the operator’s position and a description and explanation of their functions.

## 5.4 Operator’s instructions

The instructions shall specify the duties of the operator

— prior to operation,

— during operation, and

— after finishing operations.

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Special instructions shall be given if the crane is to be transported before being put into use.

## 5.5 Load diagrams and load tables

All necessary load diagrams and tables shall be included.

## 5.6 Safety devices

A drawing/sketch of the crane with location of the devices shall be included. Where appropriate, enlarged drawings/sketches of devices should be shown. Instructions about any necessary setting of tripped safety devices required to be carried out by the operator shall be included.

## 5.7 Environmental conditions

Where appropriate, an indication of maximum allowable wind speed and extreme working temperature and other possible restrictions on the operation shall be given.

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