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Standards

Irish Standard  
I.S. EN ISO 2867:2011

# Earth-moving machinery - Access systems (ISO 2867:2011)

## I.S. EN ISO 2867:2011

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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English Version

## Earth-moving machinery - Access systems (ISO 2867:2011)

Engins de terrassement - Moyens d'accès (ISO 2867:2011)

Erdbaumaschinen - Zugänge (ISO 2867:2011)

This European Standard was approved by CEN on 8 July 2011.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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<b>Contents</b>	<b>Page</b>
<b>Foreword</b> .....	<b>3</b>
<b>Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC</b> .....	<b>4</b>

## **Foreword**

This document (EN ISO 2867:2011) has been prepared by Technical Committee ISO/TC 127 "Earth-moving machinery" in collaboration with Technical Committee CEN/TC 151 "Construction equipment and building material machines - Safety" the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2012, and conflicting national standards shall be withdrawn at the latest by July 2014.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 2867:2008.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive.

For relationship with EU Directive, see informative Annex ZA, which is an integral part of this document.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

### **Endorsement notice**

The text of ISO 2867:2011 has been approved by CEN as a EN ISO 2867:2011 without any modification.

## **Annex ZA** (informative)

### **Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC**

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive 2006/42/EC on machinery.

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative clauses of this standard confers, within the limits of the scope of this standard, a presumption of conformity with the relevant Essential Requirements 1.1.7 (3<sup>rd</sup> par.), 1.6.2, 3.2.1 and 3.4.5 of that Directive and associated EFTA regulations.

**WARNING — Other requirements and other EU Directives may be applicable to the products falling within the scope of this standard.**

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STANDARD**

**ISO  
2867**

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**Earth-moving machinery — Access  
systems**

*Engins de terrassement — Moyens d'accès*



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# Contents

Page

<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Requirements for access systems</b> .....	<b>5</b>
<b>5 Requirements for enclosure openings</b> .....	<b>8</b>
<b>6 Requirements for guardrails, foot barriers, platforms, passageways, walkways and other surfaces used for walking, crawling, climbing, stepping or standing</b> .....	<b>10</b>
<b>7 Requirements and recommendations for handrails and handholds</b> .....	<b>13</b>
<b>8 Requirements for stairways and steps</b> .....	<b>15</b>
<b>9 Requirements for ladders</b> .....	<b>17</b>
<b>Annex A</b> (informative) <b>Examples of surfaces considered to be slip-resistant</b> .....	<b>20</b>
<b>Annex B</b> (normative) <b>Additional requirements for powered retractable access system that transports a person</b> .....	<b>21</b>
<b>Bibliography</b> .....	<b>22</b>

## 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 2867 was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*, Subcommittee SC 2, *Safety, ergonomics and general requirements*.

This seventh edition cancels and replaces the sixth edition (ISO 2867:2006), which has been technically revised.

## Introduction

The structure of safety standards in the field of machinery is as follows.

- a) Type-A standards (basic standards) give basic concepts, principles for design and general aspects that can be applied to machinery.
- b) Type-B standards (generic safety standards) deal with one safety aspect or one type of safeguard that can be used across a wide range of machinery:
  - type-B1 standards on particular safety aspects (e.g. safety distances, surface temperature, noise);
  - type-B2 standards on safeguards (e.g. two-hand controls, interlocking devices, pressure-sensitive devices, guards).
- c) Type-C standards (machinery safety standards) dealing with detailed safety requirements for a particular machine or group of machines.

This document is a type-C standard as stated in ISO 12100.

The machinery concerned and the extent to which hazards, hazardous situations or hazardous events are covered are indicated in the Scope of this document.

When requirements of this type-C standard are different from those which are stated in type-A or B standards, the requirements of this type-C standard take precedence over the requirements of the other standards for machines that have been designed and built according to the requirements of this type-C standard.

**NOTE** ISO 14122 is a series of type-B standards that provides general requirements for access to stationary and mobile machines and that can be used as a general reference for the design of access systems for earth-moving machines.



# Earth-moving machinery — Access systems

## 1 Scope

This International Standard specifies criteria for systems that provide access to the operator station and to routine maintenance points on earth-moving machinery as defined in ISO 6165. It is applicable to the access systems (e.g. enclosure openings, platforms, guardrails, handrails and handholds, stairways and steps, ladders) on such machines parked in accordance with the manufacturer's instructions. Its criteria are based on the 5th to 95th percentile operator dimensions as defined in ISO 3411. It deals with the following significant hazards, hazardous situations and events: slip, trip and fall of persons, unhealthy postures and excessive effort.

The general principles set out in this International Standard can be used for the selection of fixed and/or portable access systems for repairs, assembly, disassembly and longer interval maintenance.

## 2 Normative references

The following referenced documents are indispensable for the application 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 3411, *Earth-moving machinery — Physical dimensions of operators and minimum operator space envelope*

ISO 6165, *Earth-moving machinery — Basic types — Identification and terms and definitions*

ISO 12508, *Earth-moving machinery — Operator station and maintenance areas — Bluntness of edges*

ISO 14122-1:2001, *Safety of machinery — Permanent means of access to machinery — Part 1: Choice of fixed means of access between two levels*

ISO 14122-4, *Safety of machinery — Permanent means of access to machinery — Part 4: Fixed ladders*

ISO 14567, *Personal protective equipment for protection against falls from a height — Single-point anchor devices*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1 General terms and definitions

#### 3.1.1

##### **target dimension**

dimensional value that takes into account ergonomics criteria based on comfort

NOTE Acceptable values are within the specified range (from minimum to maximum).

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