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**Earth-moving machinery — Safety —**  
**Part 11:**  
**Requirements for earth and landfill**  
**compactors**

*Engins de terrassement — Sécurité —*

*Partie 11: Exigences applicables aux compacteurs de remblais  
et de déchets*



Reference number  
ISO 20474-11:2008(E)

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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.

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 20474-11 was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*, Subcommittee SC 2, *Safety, ergonomics and general requirements*.

ISO 20474 consists of the following parts, under the general title *Earth-moving machinery — Safety*:

- *Part 1: General requirements*
- *Part 2: Requirements for tractor-dozers*
- *Part 3: Requirements for loaders*
- *Part 4: Requirements for backhoe loaders*
- *Part 5: Requirements for hydraulic excavators*
- *Part 6: Requirements for dumpers*
- *Part 7: Requirements for scrapers*
- *Part 8: Requirements for graders*
- *Part 9: Requirements for pipelayers*
- *Part 10: Requirements for trenchers*
- *Part 11: Requirements for earth and landfill compactors*
- *Part 12: Requirements for cable excavators*
- *Part 13: Requirements for rollers*
- *Part 14: Information on national and regional provisions [Technical Specification]*

## Introduction

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.

Provisions that are applicable for Australia, EU, Japan or the USA, and which are mandatory for compliance with specific governmental laws, directives or regulations in force in the particular country or region, are given in ISO/TS 20474-14.

NOTE Other countries or regions may also have regional requirements.

# Earth-moving machinery — Safety —

## Part 11: Requirements for earth and landfill compactors

### 1 Scope

This part of ISO 20474 gives the safety requirements specific to earth and landfill compactors as defined in ISO 6165. It is intended to be used in conjunction with ISO 20474-1, which specifies general safety requirements common to earth-moving machine families, and with ISO/TS 20474-14, which gives information on provisions that are mandatory in particular countries or regions. The specific requirements given in this part of ISO 20474 take precedence over the general requirements of ISO 20474-1.

This part of ISO 20474 deals with all significant hazards, hazardous situations and events relevant to the earth-moving machinery within its Scope when used as intended or under conditions of misuse reasonably foreseeable by the manufacturer (see also ISO/TS 20474-14). It specifies the appropriate technical measures for eliminating or reducing risks arising from significant hazards, hazardous situations or events during commissioning, operation and maintenance. It is not applicable to machines manufactured before the date of its publication.

NOTE Roller compactors are dealt with by ISO 20474-13.

### 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 6165:2006, *Earth-moving machinery — Basic types — Identification and terms and definitions*

ISO 7096, *Earth-moving machinery — Operator seat — Laboratory evaluation of operator seat vibration*

ISO 8811, *Earth-moving machinery — Rollers and compactors — Terminology and commercial specifications*

ISO 20474-1:2008, *Earth-moving machinery — Safety — Part 1: General requirements*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 20474-1 and ISO 8811, and the following, apply.

**3.1 landfill compactor**  
self-propelled wheeled compaction machine having front-mounted equipment with a dozing or loading attachment and wheels provided with means to crush and compact waste material, which also moves, grades and loads soil, landfill or sanitary (refuse) materials through its motion

[ISO 6165:2006, definition 4.9]

**3.2 dozing equipment**  
equipment for moving or grading material through a motion of the machine

**3.3 loading equipment**  
equipment for loading, transporting, distributing, filling and grading material

**3.4 drum**  
steel wheel affixed to the axle, with chopper, padfoot, sheepfoot or grid drum, etc., used to cut, demolish or compact material

### 4 Safety requirements and/or protective measures

#### 4.1 General

Earth and landfill compactors shall comply with the safety requirements and/or protective measures of ISO 20474-1, in as far as those are not modified by the specific requirements of this clause.

#### 4.2 Access

ISO 20474-1:2008, 4.2, shall apply, with the exception that the height of the first step shall be measured from the horizontal reference plan of the drum body.

#### 4.3 Operator's station

##### 4.3.1 General

ISO 20474-1:2008, 4.3, shall apply, with the following additions (4.3.2 to 4.3.6).

For mandatory national and/or regional provisions, see ISO/TS 20474-14.

##### 4.3.2 Bottom part of operator's station

The bottom part of the operator's station shall protect against penetrating material.

##### 4.3.3 Cab door guard

For machines equipped with a cab, ISO 20474-1:2008, 4.3.2.3, shall apply, with the addition that if the lower part of the cab door is fitted with glass, a guard shall be used to protect it, except in the case where the glazing provides equivalent protection against penetrating objects (see, for example, ECE R 43:2004, Annex 10, Clause 4).

#### 4.3.4 Deodorizing filter

For machines equipped with a cab, ISO 20474-1:2008, 4.3.2.6, shall apply, with the addition that provision shall be made for the installation of a deodorizing filter.

#### 4.3.5 Air-conditioning

For machines equipped with a cab, the machine shall be so designed and built that an air conditioning unit can be fitted (see ISO 10263-4).

#### 4.3.6 Operator's seat

For machines equipped with a cab, ISO 20474-1:2008, 4.4.1.3, shall apply, with the addition that the seat shall be in accordance with ISO 7096, input spectral class EM3.

NOTE ISO 7096 has no requirement on seat vibration damping for seats used in earth and landfill compactors.

### 4.4 Fenders

ISO 20474-1:2008, 4.14.7, is not applicable to earth and landfill compactors.

### 4.5 Steering system

For mandatory national and regional provisions, see ISO/TS 20474-14.

### 4.6 Brake system

ISO 20474-1:2008, 4.7, shall apply, with the exception that the test of the brake system shall be made with rubber tyres fitted but with the operating mass of the compactor as specified by the manufacturer with steel wheels fitted.

### 4.7 Stability

For mandatory national and regional provisions, see ISO/TS 20474-14.

NOTE See ISO 20474-1 for the effect on stability of particular applications.

### 4.8 Warning devices and safety signs

For mandatory national and regional provisions, see ISO/TS 20474-14.

## 5 Verification of safety requirements and/or protective measures

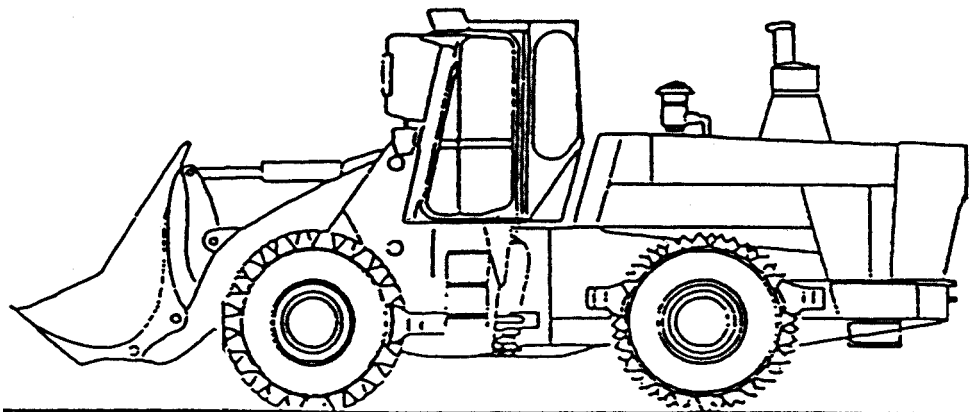
ISO 20474-1:2008, Clause 5, shall apply.

## 6 Information for use

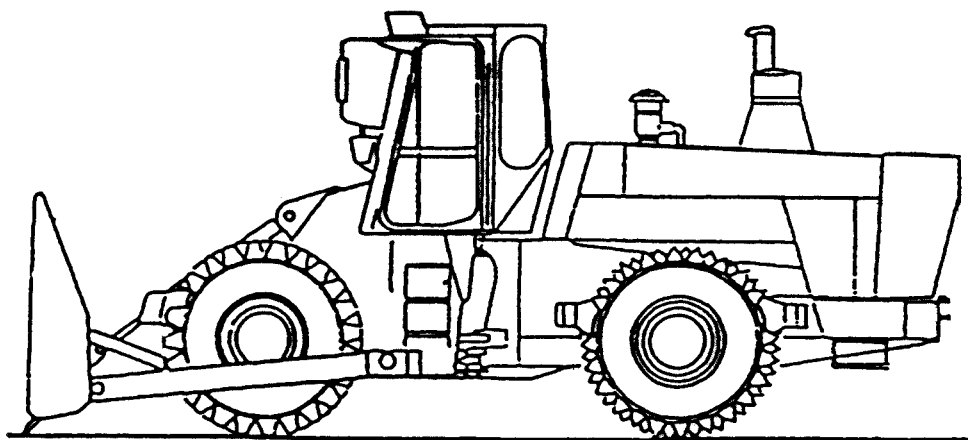
ISO 20474-1:2008, Clause 6, shall apply, with the addition of instructions to the operator's manual (6.2) that cab deodorizing filters are required for special applications.

**Annex A**  
(informative)

**Illustrations**



**Figure A.1 — Earth and landfill compactors with loading equipment**



**Figure A.2 — Earth and landfill compactors with dozing equipment**



## Bibliography

- [1] ISO 5010, *Earth-moving machinery — Rubber-tyred machines — Steering requirements*
- [2] ISO 7546, *Earth-moving machinery — Loader and front loading excavator buckets — Volumetric ratings*
- [3] ISO 10263-4, *Earth-moving machinery — Operator enclosure environment — Part 4: Operator enclosure ventilation, heating and/or air-conditioning test method*
- [4] ISO 12100-1:2003, *Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology*
- [5] ISO 12100-2:2003, *Safety of machinery — Basic concepts, general principles for design — Part 2: Technical principles*
- [6] ISO 14397-1, *Earth-moving machinery — Loaders and backhoe loaders — Part 1: Calculation of rated operating capacity and test method for verifying calculated tipping load*
- [7] UNECE R 43:2004, *Safety glazing materials and their installation on vehicles*<sup>1)</sup>

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1) UNECE (United Nations Economic Commission for Europe) Regulation No. 43.

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