



SLOVENSKI STANDARD
oSIST prEN 474-11:2017
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Stroji za zemeljska dela - Varnost - 11. del: Zahteve za kompaktorje zemlje in odpadkov

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

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Engins de terrassement - Sécurité - Partie 11 : Prescriptions applicables aux compacteurs de remblais et de déchets

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Stroji za zemeljska dela

Earth-moving machinery

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

Engins de terrassement - Sécurité - Partie 11 :
Prescriptions applicables aux compacteurs de remblais
et de déchets

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 151.

If this draft becomes a European Standard, 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (prEN 474-11:2017) has been prepared by Technical Committee CEN/TC 151 "Construction equipment and building material machines - Safety", the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 474-11:2006+A1:2008.

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(s).

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

For bibliographic references, see prEN 474-1:2017.

EN 474 "Earth-moving machinery — Safety" comprises the following parts:

- 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

This European Standard is intended for use in combination with part 1 of the series.

Introduction

This part of prEN 474 is a type C standard as stated in EN ISO 12100:2010.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this European Standard.

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

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1 Scope

This document, together with part 1, deals with all significant hazards for earth-moving machinery – earth- and landfill compactors when they are used as intended and under the conditions of misuse which are reasonably foreseeable by the manufacturer associated with the whole life time of the machine (see Clause 4).

The requirements of this part are complementary to the common requirements formulated in prEN 474-1. This document does not repeat the requirements from prEN 474-1, but adds or replaces the requirements for application for earth moving machinery – earth- and landfill compactors.

Rammer compactors and vibratory plates are dealt with in EN 500-1 and EN 500-4.

This European Standard is not applicable to earth- and landfill compactors manufactured before the date of publication of this European Standard by CEN.

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.

prEN 474-1:2017, *Earth-moving machinery — Safety — Part 1: General requirements*

EN 12643:2014 *Earth-moving machinery — Rubber-tyred machines — Steering requirements (ISO 5010:1992, modified)*

EN ISO 3450:2011, *Earth-moving machinery — Wheeled or high-speed rubber-tracked machines - Performance requirements and test procedures for brake systems (ISO 3450:2011)*

EN ISO 6165:2012, *Earth-moving machinery — Basic types - Identification and terms and definitions (ISO 6165:2012)*

EN ISO 7096:2008, *Earth-moving machinery — Laboratory evaluation of operator seat vibration (ISO 7096:2000)*

EN ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction (ISO 12100:2010)*

ISO 7546:1983, *Earth-moving machinery — Loader and front loading excavator buckets — Volumetric ratings*

ISO 10263-4:2009, *Earth-moving machinery — Operator enclosure environment — Part 4: Heating, ventilating and air conditioning (HVAC) test method and performance*

ISO 14397-1:2007, *Earth-moving machinery — Loaders and backhoe loaders — Part 1: Calculation of rated operating capacity and test method for verifying calculated tipping load*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in prEN 474-1:2017, ISO 13539:1998 and EN ISO 12100:2010 and the following apply.

Note 1 to entry: Terminology for earth- and landfill compactors is specified in ISO 8811:2000 and illustrated in Annex C of this European Standard.

prEN 474-11:2017 (E)

Note 2 to entry: Definitions used in EN and ISO standards referred to in this European Standard are also valid for this document.

3.1**landfill compactor**

self-propelled, wheeled compaction machine having front-mounted equipment with a dozing or loading attachment and wheels provided with the means to crush and compact waste material, and which also moves, grades and loads soil, landfill or sanitary (refuse) materials through its own motion (see EN ISO 6165:2012, 4.9)

3.2**dozing equipment for earth- and landfill compactors**

equipment for moving or grading material through a motion of the machine in accordance ISO 6747:2013

3.3**loading equipment**

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

3.4**drums**

steel wheels affixed to the axles with choppers, padfoot, sheepfoot or grid drums etc. which are used to cut, demolish or compact material

4 List of additional significant hazards

See Annex A.

NOTE Annex A (normative) contains all the significant hazards, hazardous situations and events, as far as they are dealt with in this European Standard, identified by risk assessment as significant for this type of machinery and which require action to eliminate or reduce the risk.

5 Safety requirements and/or measures**5.1 General**

Earth- and landfill compactors shall comply with the requirements of prEN 474-1:2017, as far as not modified or replaced by the requirements of this part.

5.2 Operator's station**5.2.1 General**

prEN 474-1:2017, 5.3 shall apply with the additions in 5.3.2 to 5.3.7.

5.2.2 Operator' station equipped with a cab

The requirements of prEN 474-1:2017, 5.3.2 shall apply with the following additions:

Earth- and landfill compactors shall be fitted with a cab.

5.2.2.1 Cab protection

The bottom part of the cab shall be able to protect the operator against penetrating material.

5.2.2.2 Deodorising filter

prEN 474-1:2017, 5.3.2.1.2 shall apply with the addition that provision shall be made for the installation of a deodorising filter.

5.2.2.3 Air-conditioning

Earth- and landfill compactors shall be so designed and built that an air conditioning unit can be fitted in accordance with ISO 10263-4:2009.

5.2.2.4 Primary access opening

prEN 474-1:2017, 5.3.2.5 shall apply with the addition that:

- if the primary access opening is equipped with a cab-door;
- and if the lower part of this cab-door on an earth- and landfill compactor is fitted with glass, the lower part of the cab-door shall be protected by a separate guard unless the glazing provides similar protection against penetrating objects as the separate guard.

NOTE See e.g. ECE-R 43, Annex 10, Clause 4 for further information.

5.3 Operator's seat

prEN 474-1:2017, 5.4 shall apply with the addition that the seat shall meet EN ISO 7096:2008 for the input spectral class EM3.

NOTE According to EN ISO 7096:2008, 1.2 there is no requirement on seat vibration damping for seats used in earth- and landfill compactors.

5.4 Steering system

prEN 474-1:2017, 5.6.2 shall apply with the addition, that the steering test on earth and landfill compactors shall be conducted in accordance with EN 12643:2014 and with pneumatic rubber tyres instead of compactor steel-wheels fitted for testing purposes.

5.5 Braking system

prEN 474-1:2017, 5.7 shall apply with those modifications as given in Annex B.

5.6 Stability

prEN 474-1:2017, 5.11 shall apply with the following additions for machines with loading equipment:

All rated capacities as defined hereafter are based on tests and/or calculations of machines being on level and firm supporting surface.

The mass of the load, its density and the location of its centre of gravity as well as the mass of the attachment and the attachment bracket, if fitted, shall be included in the determination of the rated operating load and the size/capacity of the attachment.

To provide sufficient stability the rated operating load requirements in the intended operating applications shall be determined as follows:

- tipping load and rated operating load shall be determined according to ISO 14397-1:2007;
- volumetric rating of the bucket shall be determined according to ISO 7546:1983.

NOTE 1 See EN 474-3:2017, 5.6.2 for the effect on stability of particular applications.

NOTE 2 The mass, volumetric rating of bucket and density of the material should be taken into account when the bucket capacity is selected for a specific application.

prEN 474-11:2017 (E)**5.7 Lifting operation**

prEN 474-1:2017, 5.12 does not apply to earth- and landfill compactors.

Earth- and landfill compactors do not need lift arm lowering control device(s) (for movable parts of lifting devices as defined e.g. in ISO 8643).

5.8 Fenders

prEN 474-1:2017, 5.14.5 does not apply to earth- and landfill compactors.

6 Information for use

prEN 474-1:2017, Clause 7 shall apply with the addition that cab deodorising filters are required for special applications.

NOTE See prEN 474-1:2017, Annex H for further reference.

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