



SLOVENSKI STANDARD
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Glavni naslov: Zemeljska dela - Varnost - Del 10: Zahtevi za grabljevalnike

Earth-moving machinery - Safety - Part 10: Requirements for trenchers

Erdbaumaschinen - Sicherheit - Teil 10: Anforderungen für Grabenfräsen

Engins de terrassement - Sécurité - Partie 10: Prescriptions applicables aux trancheuses

Ta slovenski standard je istoveten z: **EN 474-10:2006+A1:2009**

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EUROPEAN STANDARD
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Earth-moving machinery - Safety - Part 10: Requirements for trenchers

Engins de terrassement - Sécurité - Partie 10: Prescriptions applicables aux trancheuses

Erdbaumaschinen - Sicherheit - Teil 10: Anforderungen für Grabenfräsen

This European Standard was approved by CEN on 17 April 2006 and includes Amendment 1 approved by CEN on 20 December 2008.

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 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 Management Centre has the same status as the official versions.

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Foreword

This document (EN 474-10:2006+A1:2009) 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 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of an identical text or by endorsement, at the latest by August 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This document includes Amendment 1, approved by CEN on 2008-12-20.

This document supersedes A1 EN 474-10:2006 A1.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

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.

A1 For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. A1

For bibliographic references, see A1 EN 474-1:2006+A1:2009 A1.

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

- Part 1: General requirements [SIST EN 474-10:2007+A1:2009](https://standards.iteh.ai/catalog/standards/sist/cae782f8-0617-45e4-8c5a-ef66a5a84a4e/sist-en-474-10-2007a1-2009)
- 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

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

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia,

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Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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Introduction

This part of EN 474 is a type C standard as stated in EN ISO 12100-1:2003.

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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EN 474-10:2006+A1:2009 (E)**1 Scope**

This part of EN 474 deals with all significant hazards, hazardous situations and events relevant to trenchers as defined in EN ISO 6165:2006, when they are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer (see Clause 4).

The requirements of this part are complementary to the common requirements formulated in **A1** EN 474-1:2006+A1:2009 **A1**.

This part does not deal with the specific hazards related to derivative use.

This part does not repeat the requirements from **A1** EN 474-1:2006+A1:2009 **A1**, but adds or replaces the requirements for application for trenchers.

This part specifies the appropriate technical measures to eliminate or reduce risks arising from the significant hazards, hazardous situations and events during commissioning, operation and maintenance of trenchers.

This European Standard is not applicable to trenchers manufactured before the date of publication of this European Standard by CEN.

2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

A1 EN 474-1:2006+A1:2009 **A1**, *Earth-moving machinery — Safety — Part 1: General requirements*
[SIST EN 474-10:2007+A1:2009](https://standards.iteh.ai/catalog/standards/sist/cae782f8-0617-45e4-8c5a-cf66a5a84a4e/sist-en-474-10-2007a1-2009)

A1 *deleted text* **A1** <https://standards.iteh.ai/catalog/standards/sist/cae782f8-0617-45e4-8c5a-cf66a5a84a4e/sist-en-474-10-2007a1-2009>

A1 EN ISO 3411:2007, *Earth-moving machinery — Physical dimensions of operators and minimum operator space envelope (ISO 3411:2007)* **A1**

A1 EN ISO 3471:2008, *Earth-moving machinery - Roll-over protective structures - Laboratory tests and performance requirements (ISO 3471:2008)* **A1**

A1 EN ISO 6682:2008, *Earth-moving machinery — Zones of comfort and reach for controls (ISO 6682:1986 including Amendment 1:1989)* **A1**

A1 EN ISO 7096:2008 **A1**, *Earth-moving machinery — Laboratory evaluation of operator seat vibration (ISO 7096:2000)*

EN ISO 12100-1:2003, *Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology (ISO 12100-1:2003)*

A1 ISO 6016:2008 **A1**, *Earth-moving machinery — Methods of measuring the masses of whole machines, their equipment and components*

A1 ISO 6393:2008, *Earth-moving machinery - Determination of sound power level - Stationary test conditions* **A1**

A1 ISO 6394:2008 **A1**, *Earth-moving machinery — Determination of emission sound pressure level at operator's position — Stationary test conditions*

ISO 12509:2004, *Earth-moving machinery — Lighting, signalling and marking lights, and reflex-reflector devices*

ISO 17063:2003, *Earth-moving machinery — Braking systems of pedestrian-controlled machines — Performance requirements and test procedures*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in [EN 474-1:2006+A1:2009](#) and EN ISO 12100-1:2003 and the following apply.

NOTE 1 Terminology for trenchers is specified in ISO 13539:1998 and illustrated in Annex B of this European Standard.

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

3.1

trencher

self-propelled crawler or wheeled machine, having a rear- and/or front-mounted equipment/attachment, primarily designed to produce a trench in a continuous operation, through a motion of the machine; the attachment can be a digging chain, wheel disk, plough blade or similar tool (see EN ISO 6165:2006)

3.2

protective bar

structure generally above and parallel to the digging chain which provides a degree of protection from contact with the digging element (see figures in Annex B)

3.3

trench

narrow horizontal excavation for which, in general, the depth is greater than the width

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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

Trenchers shall comply with the requirements of [EN 474-1:2006+A1:2009](#), as far as not modified or replaced by the requirements of this part.

5.2 Ride-on operated trenchers

5.2.1 Operator's station

For minimum space envelope [EN 474-1:2006+A1:2009](#), 5.3.1 applies with the exception that, for trenchers with an operating mass according to [ISO 6016:2008](#) of less than 2 000 kg, the minimum space envelope width dimension 920 mm according to [EN ISO 3411:2007](#), Figure 5 may be reduced to 650 mm at elbow height.