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**Stroji za zemeljska dela - Varnost - 7. del: Zahteve za grabilnike (skreperje)**

Earth-moving machinery - Safety - Part 7: Requirements for scrapers

Erdbaumaschinen - Sicherheit - Teil 7: Anforderungen für Scraper

Engins de terrassement - Sécurité - Partie 7: Prescriptions applicables aux décapeuses

**Ta slovenski standard je istoveten z: EN 474-7:2006+A1:2009**[SIST EN 474-7:2007+A1:2009](https://standards.iteh.ai/catalog/standards/sist/52355b74-e90b-423d-8f45-f1bcabec8be4/sist-en-474-7-2007a1-2009)<https://standards.iteh.ai/catalog/standards/sist/52355b74-e90b-423d-8f45-f1bcabec8be4/sist-en-474-7-2007a1-2009>**ICS:**

53.100

Stroji za zemeljska dela

Earth-moving machinery

**SIST EN 474-7:2007+A1:2009****en,fr**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
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**EN 474-7:2006+A1**

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English Version

**Earth-moving machinery - Safety - Part 7: Requirements for  
scrapers**

Engins de terrassement - Sécurité - Partie 7: Prescriptions  
applicables aux décapeuses

Erdbaumaschinen - Sicherheit - Teil 7: Anforderungen für  
Scraper

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

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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 474-7:2006+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of an identical text or by endorsement, at the latest by August 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.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 474-7:2006 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 474-7:2007+A1:2009](https://standards.iteh.ai/catalog/standards/sist/52355b74-e90b-423d-8f45-f1bcabc8be4/sist-en-474-7-2007a1-2009)
- 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 474-7:2006+A1:2009 (E)

## 1 Scope

This part of EN 474 deals with all significant hazards, hazardous situations and events relevant to wheel and crawler scrapers except towed scrapers 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 **EN 474-1:2006+A1:2009**, but adds or replaces the requirements for application for scrapers.

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

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 scrapers.

This European Standard is not applicable to scrapers 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.

**EN 474-1:2006+A1:2009**, *Earth-moving machinery — Safety — Part 1: General requirements*

**EN ISO 7096:2008**, *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)*

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

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

**ISO 10268:1993**, *Earth-moving machinery — Retarders for dumpers and tractor-scrapers — Performance tests*

## 3 Terms and definitions

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

**NOTE 1** Terminology for scrapers is specified in ISO 7133:1994 and illustrated in Annex B of this European Standard.

**NOTE 2** Crawler scrapers are not covered in ISO 7133:1994 but are illustrated in Annex B of this European Standard.

**NOTE 3** Definitions used in EN and ISO standards referred to in this European Standard are also valid for this document.



**3.1****scraper**

self-propelled or towed crawler or wheeled machine, which has a bowl with a cutting edge positioned between the axles and which cuts, loads, transports, discharges and spreads material through a forward motion

NOTE A powered mechanism (elevator) fixed to the scraper bowl can assist the loading through a forward motion.

**3.2****towed scraper**

non-self-propelled scraper (3.1) propelled by a towing machine on which the operator's station is located

**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**

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

**5.2 Operator's seat**

[\[A1\] EN 474-1:2006+A1:2009 \[A1\]](#), 5.4.1 applies with the addition that the seat shall meet the input spectral class EM2 according to [\[A1\] EN ISO 7096:2008 \[A1\]](#) for scrapers without axle or frame suspension.

**5.3 Retarder**

If a retarder system is installed it shall meet the requirements of ISO 10268:1993.

**5.4 Articulated frame lock**

[\[A1\] EN 474-1:2006+A1:2009 \[A1\]](#), 5.14.5 does not apply to scrapers.

**5.5 Towing device**

[\[A1\] EN 474-1:2006+A1:2009 \[A1\]](#), 5.15.5 applies with the following exception:

Attachment points (push plates, arc equipment etc.) on scrapers that are there only to permit two scrapers to assist each other in loading, are not deemed to be towing devices as defined in [\[A1\] EN 474-1:2006+A1:2009 \[A1\]](#), 5.15.5.

**5.6 Noise****5.6.1 Sound power level**

[\[A1\] EN 474-1:2006+A1:2009 \[A1\]](#), 5.13.2.1 applies and the sound power level for scrapers shall be measured according to [\[A1\] ISO 6393:2008 \[A1\]](#).