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

## EESTI STANDARDI EESSÕNA

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See Eesti standard EVS-EN ISO 3450:2011 sisaldab Euroopa standardi EN ISO 3450:2011 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 3450:2011 consists of the English text of the European standard EN ISO 3450:2011.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
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Võtmesõnad: braking systems, braking tests, earth moving equipment, performance, performance tests, specifications, tests,

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English Version

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

Engins de terrassement - Engins sur pneumatiques ou sur chenilles caoutchouc à grande vitesse - Exigences de performance et modes opératoires d'essai des systèmes de freinage (ISO 3450:2011)

Erdbaumaschinen - Maschinen auf Rädern oder schnellaufende gummigleiskettenbereifte Maschinen - Anforderungen und Prüfungen für Bremssysteme (ISO 3450:2011)

This European Standard was approved by CEN on 15 October 2011.

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## Foreword

This document (EN ISO 3450:2011) 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of an identical text or by endorsement, at the latest by May 2012, and conflicting national standards shall be withdrawn at the latest by May 2012.

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 3450:2008.

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, 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 3450:2011 has been approved by CEN as a EN ISO 3450:2011 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 one 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 of that Directive and associated EFTA regulations.

**WARNING — Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this Standard.**

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# Earth-moving machinery — Wheeled or high-speed rubber-tracked machines — Performance requirements and test procedures for brake systems

## 1 Scope

This International Standard specifies minimum performance requirements and test procedures for the service, secondary and parking brake systems of wheeled and high-speed rubber-tracked earth-moving machines, for the uniform assessment of those brake systems.

It is applicable to the following earth-moving machinery, operating on work sites or in mining, or travelling on public roads:

- self-propelled, rubber-tyred earth-moving machines, as defined in ISO 6165;
- self-propelled rollers and landfill compactors, as defined in ISO 6165 and ISO 8811;
- self-propelled scrapers, as defined in ISO 7133;
- remote-control machines, as defined in ISO 6165, wheeled or rubber-tracked;
- derivative earth-moving machines with rubber tyres;
- earth-moving machines with rubber tracks and a maximum machine speed  $\geq 20$  km/h.

It is not applicable to pedestrian-controlled earth-moving machinery (see ISO 17063) or crawler earth-moving machines with steel or rubber tracks that travel at  $< 20$  km/h (see ISO 10265). While purpose-built underground mining machines are not within the scope of this International Standard, its provisions can generally be applied to those machines with some braking performance modifications and additions (see Annex A).

NOTE At the time of publication, no International Standard dedicated to purpose-built underground mining machines had been developed.

## 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 6014, *Earth-moving machinery — Determination of ground speed*

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

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

ISO 7133, *Earth-moving machinery — Tractor-scrapers — Terminology and commercial specifications*

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

ISO 9248, *Earth-moving machinery — Units for dimensions, performance and capacities, and their measurement accuracies*

ISO 10968, *Earth-moving machinery — Operator's controls*

ISO 15998, *Earth-moving machinery — Machine-control systems (MCS) using electronic components — Performance criteria and tests for functional safety*