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Earth-moving machinery — Basic types — Identification and vocabulary

*Engins de terrassement — Principaux types — Identification et
vocabulaire*



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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*, Subcommittee SC 4, *Terminology, commercial nomenclature, classification and ratings*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 151, *Construction equipment and building material machines - Safety*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This seventh edition cancels and replaces the sixth edition (ISO 6165:2012), which has been technically revised.

The main changes are as follows:

- the following terms were added: operator protective structure ([3.1.14](#)), canopy ([3.1.15](#)), cab ([3.1.16](#)), minimal tail radius excavator ([3.2.4.2](#)) and vacuum excavator ([3.2.13](#));
- the definition for compact tool carrier ([3.2.12](#)) was revised;
- the definition for compactor ([3.2.9](#)) was revised;
- the terminological entry for horizontal directional drill was deleted;
- [Annexes A](#) and [B](#) were revised according to the modification text.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document establishes the vocabulary for earth-moving machinery according to the function and configuration. The safety requirements, for most of machine families listed in this document, are provided in the ISO 20474 series.

Earth-moving machinery — Basic types — Identification and vocabulary

1 Scope

This document provides vocabulary and an identification structure for classifying earth-moving machinery designed to perform the following operations:

- excavation;
- loading;
- transportation;
- drilling, spreading, compacting or trenching of earth, rock and other materials, during work, for example, on roads and dams, in quarries and mines and on building sites.

The purpose of this document is to provide a clear means to identify earth-moving machinery according to its function and design configurations which can include additional classifications according to its operating mass and control operator configuration.

[Annex A](#) provides a procedure based on the identification structure used by this document to classify the machinery and introduce detailed identifications consistent with the logic implied by the structure.

[Annex B](#) provides a hierarchy of the operator control configurations for earth-moving machinery.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1 Machine characteristics and operating classification

3.1.1

earth-moving machinery

self-propelled or towed *base machine* (3.1.11) on wheels (drums or tyres), crawlers, legs, which can have *equipment* (3.1.12) or *attachment* (3.1.13), or both, primarily designed to perform excavation, loading, transportation, drilling, spreading, compacting or trenching of earth, rock and other materials

Note 1 to entry: Earth-moving machinery can be either direct-controlled or be remote-controlled. It can also operate autonomously or semi-autonomously.

Note 2 to entry: See [Annex B](#) for types of operator control configurations.