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I.S. EN ISO 6165:2012

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

I.S. EN ISO 6165:2012

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

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Foreword

This document (EN ISO 6165:2012) 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of an identical text or by endorsement, at the latest by March 2013, and conflicting national standards shall be withdrawn at the latest by March 2013.

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 6165:2006.

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I.S. EN ISO 6165:2012

INTERNATIONAL STANDARD

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Earth-moving machinery — Basic types — Identification and terms and definitions

Engins de terrassement — Principaux types — Identification et termes et définitions

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 6165 was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*, Subcommittee SC 4, *Terminology, commercial nomenclature, classification and ratings*.

This sixth edition cancels and replaces the fifth edition (ISO 6165:2006), which has been technically revised.

Earth-moving machinery — Basic types — Identification and terms and definitions

1 Scope

This International Standard gives terms and definitions 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 International Standard is to provide a clear means of identifying machines according to their function and design configurations.

Annex A provides a procedure based on the identification structure used by this International Standard for classifying the machinery and for introducing detailed identifications consistent with the logic implied by the structure.

Annex B provides a hierarchy of the operator control configurations for earth-moving machinery.

The Bibliography provides a list of terminology standards for many of the machine families identified in this International Standard. Included in those terminology standards are figures depicting different configurations of the machine types in each machine family.

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 10261, *Earth-moving machinery — Product identification numbering system*

3 Terms and definitions

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

3.1
earth-moving machinery
self-propelled or towed machine on wheels, crawlers or legs, having *equipment* (3.9) or *attachment* (3.10) (working tool), or both, primarily designed to perform excavation, loading, transportation, drilling, spreading, compacting or trenching of earth, rock and other materials

Note to entry: Earth-moving machinery can be of a type either directly controlled by an operator riding or not riding on the machine, or can be remotely controlled by wired or wireless means with or without direct view on the working area. See Annex B for types of operator control configurations.

3.1.1
compact machine
earth-moving machinery (3.1), except for *compact excavators* (4.4.4) and *compact loaders* (4.2.3), having an *operating mass* (3.7) of 4 500 kg or less

3.2
direct-control machine
self-propelled *earth-moving machinery* (3.1) where the machine is controlled by an operator in physical contact with the machine

3.2.1
ride-on machine
self-propelled *direct-control machine* (3.2) where the control devices are located on the machine and the machine is controlled by a seated or standing operator

3.2.2
non-riding machine
self-propelled *direct-control machine* (3.2) where the control devices are located on the machine and the machine is controlled by a pedestrian operator (neither seated nor standing on the machine)

3.3
remote-control machine
self-propelled *earth-moving machinery* (3.1) where the machine is controlled by the transmission of signals from a control box (transmitter) that is not located on the machine to a receiving unit (receiver) located on the machine

Note to entry: The remote control can either be wireless or by wire.

3.3.1
wire-controlled machine
self-propelled *remote-control machine* (3.3) where the control of the machine is accomplished by signals transmitted through wires from an operator-controlled device distant from the machine

Note to entry: Normally, a wire-controlled machine is operated with a direct view on the working area.

3.3.2
wireless-controlled machine
self-propelled *remote-control machine* (3.3) where the control of the machine is accomplished by signals transmitted through the air from an operator-controlled device distant from the machine

Note to entry: A wireless-controlled machine is operated with or without a direct view on the working area.

3.4
machine family
group of machines designed for the same type of operation

Note to entry: *Earth-moving machinery* (3.1) comprises the following machine families:

— *dozers* (4.1);

— *loaders* (4.2);

— *backhoe loaders* (4.3);

— *excavators* (4.4);

— *trenchers* (4.5);

— *dumpers* (4.6);

— *scrapers* (4.7);

— *graders* (4.8);

— *landfill compactors* (4.9);

— *rollers* (4.10);

— *pipelayers* (4.11);

— *horizontal directional drills* (4.12);

— *compact tool carriers* (4.13).

3.5
machine model
machine type
manufacturer's designation of a *machine family* (3.4)

Note to entry: A machine family can have several models or types which are the manufacturer's type designation of the machine.

3.6
individual machine
machine having a unique identification number for each manufactured machine

Note to entry: The product identification number (PIN) according to ISO 10261 clearly identifies the individual machine.

3.7
operating mass
mass of the *base machine* (3.8), with *equipment* (3.9) and empty *attachment* (3.10) in the most usual configuration as specified by the manufacturer, and with the operator (75 kg), full fuel tank and all fluid systems (i.e. hydraulic oil, transmission oil, engine oil, engine coolant) at the levels specified by the manufacturer and, when applicable, with sprinkler water tank(s) half full

[SOURCE: ISO 6016:2008, 3.2.1.]

Note 1 to entry: The mass of the operator is not included for non-riding machines.

Note 2 to entry: Ballast mass at delivery can be included if specified by the manufacturer.

3.8
base machine
machine with a cab or canopy and operator-protective structures if required, without *equipment* (3.9) or *attachments* (3.10) but possessing the necessary mounting for such equipment and attachments

[SOURCE: ISO 6746-2:2003, 3.3.]

3.9
equipment
set of components mounted onto the *base machine* (3.8) that allows an *attachment* (3.10) to perform the primary design function of the machine

[SOURCE: ISO 6746-2:2003, 3.4.]

3.10
attachment
assembly of components that can be mounted onto the *base machine* (3.8) or *equipment* (3.9) for specific use

[SOURCE: ISO 6746-2:2003, 3.5.]