
**Earth-moving machinery — Crawler
machines — Performance requirements
and test procedures for braking systems**

*Engins de terrassement — Engins à chenilles — Exigences de
performance et modes opératoires d'essai des dispositifs de freinage*

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Published in Switzerland

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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 10265 was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*, Subcommittee SC 1, *Test methods relating to machine performance*.

This second edition cancels and replaces the first edition (ISO 10265:1998), which has been technically revised.

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Earth-moving machinery — Crawler machines — Performance requirements and test procedures for braking systems

1 Scope

This International Standard specifies minimum performance criteria and test methods to enable uniform assessment of the service, secondary and parking brake systems of crawler machines.

It is applicable to self-propelled crawler machines, as defined in ISO 6165 including derivative earth-moving machines with rubber tracks, with a maximum design speed of 20 km/h or less. This International Standard does not cover those machines that are covered by ISO 17063 or wheeled machines equipped with over-the-tyre tracks. Crawler machines with maximum design speed greater than 20 km/h conform to ISO 3450.

NOTE Crawler machines used in underground mining applications might have other regional or local brake system requirements.

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 6014:1986, *Earth-moving machinery — Determination of ground speed*

ISO 6016:1998, *Earth-moving machinery — Methods of measuring the masses of whole machines, their equipment and components*

ISO 9248:1992, *Earth-moving machinery — Units for dimensions, performance and capacities and their measurement accuracies*

ISO 10266:1992, *Earth-moving machinery — Determination of slope limits for machine fluid systems operation — Static test method*

ISO 10968:2004, *Earth-moving machinery — Operator's controls*

ISO 15998:—¹⁾, *Earth-moving machinery — Machine-control system (MCS) using electronic components — Performance criteria and tests for functional safety*

3 Terms and definitions

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

3.1 Brake systems

1) To be published.

3.1.1

brake system

all the components that combine to stop and/or hold the machine, including the control(s), the brake actuation system, the brake(s) and all parts connecting the brake to the track

3.1.2

service brake system

primary system used for stopping and holding the machine

3.1.3

secondary brake system

system used for stopping the machine in the event of any single failure in the service brake system

3.1.4

parking brake system

system used to hold a stopped machine in a stationary position

3.2 Brake system components

3.2.1

control

component directly activated by the operator to cause a force, a braking signal or braking request to be transmitted to the brake(s)

3.2.2

brake actuation system

all the components between the control(s) and the brake(s) which connect(s) them functionally

3.2.3

brake

components that directly apply a force to oppose movement of the machine

NOTE Brakes can, for example, be of friction, electrical, regenerative device, hydrostatic or other fluid types.

3.3 <https://standards.iteh.ai/catalog/standards/iso/f4eb4c6f-bbab-4a85-ae5c-482e1d918d1a/iso-10265-2008>

brake retarding force

decelerating or holding force due to brake system action plus rolling resistance, but excluding any braking effect by the engine (i.e., engine brakes, retarders, exhaust brakes)

NOTE In practice, this is the force measured in a line connecting the machine being tested to a pulling or anchoring machine or device.

3.4

common component

component that performs a function in two or more brake systems

3.5

machine mass

M
operating mass of a machine which includes the heaviest combination of cab, canopy, operator protective structures, if required, with all their components and mountings, any combination of equipment approved by the manufacturer of the machine, including operator and full liquid systems in accordance with ISO 6016

NOTE The machine mass for crawler tractors (i.e., machines with integrated buckets, bins, bowls which typically travel with a load) is to include a payload.