
**Powered industrial trucks and tractors —
Brake performance and component
strength**

*Chariots de manutention et tracteurs industriels automoteurs —
Performance de freinage et résistance des éléments de frein*



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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 6292 was prepared by Technical Committee ISO/TC 110, *Industrial trucks*, Subcommittee SC 2, *Safety of powered industrial trucks*.

This second edition cancels and replaces the first edition (ISO 6292:1996) and includes some of the contents of ISO 6292:1996 but has some major changes in approach to brake requirements for powered industrial trucks and tractors.

The major changes in approach are:

- stopping distance methodology has been included. Braking reaction time, but not human reaction time, is included in the determination of the stopping distance. See ISO/TR 29944;
- addition of assessment of brake fade;
- groups A1 and A2 (see Table 2) to be categorised by truck rated capacity or laden mass.

Introduction

Industrial trucks, tractors and burden carriers, generally referred to as trucks throughout, can satisfy the braking requirements of this International Standard by complying with either the stopping distance requirements or the drawbar drag requirements. Based on the requirements for brakes of rubber-tyred earthmoving machinery (ISO 3450), the stopping distance as a measurement value has been established. The brake performance is limited by consideration of the load. For further reference as to how the measurement of stopping distance and measurement of brake reaction time were derived, see ISO/TR 29944.

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Powered industrial trucks and tractors — Brake performance and component strength

1 Scope

This International Standard specifies performance, test methods, controls, control forces and component strength for brake systems fitted to

- powered industrial trucks of all capacities,
- industrial tractors with rated capacities up to and including 20 000 N drawbar pull,
- burden carriers, and
- industrial trucks handling freight containers,

as defined in ISO 5053.

Loss of electrical power and loss of any other form of power assistance is not covered by this International Standard. Braking used in emergency situations (e.g. activating the emergency switch or control system shut down) is not covered in this International Standard.

This International Standard only includes requirements for newly manufactured trucks.

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 3691-1:—¹⁾, *Industrial Trucks — Safety requirements and verification — Part 1: Self-propelled industrial trucks, other than driverless, variable-reach trucks and burden-carrier trucks*

ISO 5053, *Powered industrial trucks — Terminology*

1) To be published. (Revision of ISO 3691:1980)