

Earth-mover tyres and rims —

Part 1: Tyre designation and dimensions

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National foreword

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A list of organizations represented on AUE/4 can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Partie 1: Désignation et cotes des pneumatiques



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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 4250-1 was prepared by Technical Committee ISO/TC 31, *Tyres, rims and valves*, Subcommittee SC 6, *Off-the-road tyres and rims*.

This fourth edition cancels and replaces the third edition (ISO 4250-1:1996), which has been technically revised.

ISO 4250 consists of the following parts, under the general title *Earth-mover tyres and rims*:

- *Part 1: Tyre designation and dimensions*
- *Part 2: Loads and inflation pressures*
- *Part 3: Rims*

Earth-mover tyres and rims —

Part 1: Tyre designation and dimensions

1 Scope

ISO 4250 consists of three parts (see the Foreword) laying down the technical elements relating to designation and dimensions of tyres and rims for earth-movers; it also gives load tables for these tyres.

This part of ISO 4250 specifies designations and dimensions for earth-mover tyres, and gives the recommended rims primarily intended for earth-moving machinery as defined in ISO 6165.

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 4223-1, *Definitions of some terms used in the tyre industry — Part 1: Pneumatic tyres*

ISO 4250-2:2006, *Earth-mover tyres and rims — Part 2: Loads and inflation pressures*

ISO 4250-3:2006, *Earth-mover tyres and rims — Part 3: Rims*

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

3 Terms and definitions

For the purposes of this document, the definitions given in ISO 4223-1 and ISO 4250-2 apply.

NOTE For a list of equivalent terms, see ISO 3877-1 ^[1].

4 Tyre designation

4.1 General

The designation of the tyre shall be shown on its sidewall and shall include the following details:

- size and construction characteristics (see 4.2);
- index of tyre strength (see 4.3);

and may include:

- service condition characteristics (see 4.4).

The designation may also include the various use characteristics given in 4.5 as necessary.

4.2 Tyre size and construction

4.2.1 General

The tyre size and construction shall be indicated as specified in 4.2.2 to 4.2.6.

4.2.2 Nominal section width

The nominal section width shall be expressed by a code. In the case of 65, 70, 75, 80 and 90 series tyres, this is followed, separated by a slash (/), by the nominal aspect ratio.

4.2.3 Normal aspect ratio

The nominal aspect ratio may be expressed as a percentage as a multiple of 5.

4.2.4 Tyre construction code

The type construction code shall be as follows:

- (dash) for diagonal/bias construction
- R for radial construction

In addition, the word “RADIAL” may also appear on the tyre.

4.2.5 Nominal rim diameter code

The nominal rim diameter shall be expressed by a code as given in ISO 4250-3:2006, Table 7. The suffix “TG” shall be used to identify tyres mounted on rims with a rim diameter code of 24 but having a specified diameter (D) of 614,4 mm. The suffix “K” shall be used to identify tyres mounted on rims with a rim diameter code of 15 but having a specified diameter (D) of 380,2 mm.

4.2.6 Tubeless tyres

Tubeless tyres shall be marked “TUBELESS”.

4.3 Index of tyre strength

4.3.1 General

The index of tyre strength is used to identify a given tyre with its maximum recommended load when used in a specific type of service. It shall be as specified in 4.3.2 or 4.3.3.

4.3.2 Diagonal tyres

The index of tyre strength of diagonal/bias tyres shall be expressed by a numerical code in conjunction with the letter “PR” (ply rating), e.g. “16 PR” or by service condition characteristics as given in 4.4 or by both the numerical code and service condition characteristics.

4.3.3 Radial tyres

The index of tyre strength of radial tyres shall be expressed by a symbol in the form of 1, 2 or 3 stars (symbol marking), e.g. “★” or by service condition characteristics as given in 4.4 or by the symbol and service condition characteristics.

4.4 Service condition characteristics

4.4.1 General

The service condition characteristics shall be indicated as follows:

Load index	Speed symbol	Service description
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For the specific types of service, earth-mover tyres may be marked with several service condition characteristics, for example, those for earth-moving haulage service at 50 km/h, for low speed service at 10 km/h (loading cycle), or for grader service at 40 km/h.

NOTE Definitions of operating conditions are given in ISO 4250-2:2006, 3.2.

4.4.2 Load index

The load index is a numerical code associated with a maximum load a tyre can carry at the speed indicated by its speed symbol under service conditions specified by the tyre manufacturer.

The correlation between load indices and tyre load-carrying capacities shall be as given in Table 1.