BS ISO 5751-1:2010

BSI Standards Publication

Motorcycle tyres and rims (metric series)

Part 1: Design guides

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National foreword

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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 5751-1 was prepared by Technical Committee ISO/TC 31, *Tyres, rims and valves*, Subcommittee SC 10, *Cycle, moped, motorcycle tyres and rims*.

This seventh edition cancels and replaces the sixth edition (ISO 5751-1:2004, including ISO 5751-1:2004/Cor.1:2006), which has been technically revised.

ISO 5751 consists of the following parts, under the general title *Motorcycle tyres and rims (metric series)*:

— *Part 1: Design guides*

— *Part 2: Tyre dimensions and load-carrying capacities*

— *Part 3: Range of approved rim contours*

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INTERNATIONAL STANDARD ISO 5751-1:2010(E)

Motorcycle tyres and rims (metric series) —

Part 1:
Design guides

1 Scope

This part of ISO 5751 gives guidelines for the design of, and specifies the designation and calculation of the dimensions for metric series motorcycle tyres. It is applicable to motorcycle tyres with a reduced height/width ratio (100 and lower) that can be fitted on cylindrical bead-seat or 5° tapered bead-seat rims. It is also applicable to other concepts of tyre and rim, provided the appropriate rim/section ratios and coefficients are established for them.

NOTE See ISO 4249 for motorcycle tyres and rims (code-designated series) of rim diameter codes 13 and above, and ISO 6054 for those of codes 12 and below.

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 4223-1:2002, *Definitions of some terms used in the tyre industry — Part 1: Pneumatic tyres*

ISO 4249-3, *Motorcycle tyres and rims (code-designated series) — Part 3: Rims*

3 Terms and definitions

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

4 Tyre designation

4.1 General

The designation of the tyre shall be shown on its sidewall and shall include the following markings, placed close to each other:

— size and construction (see 4.2);

— service description (see 4.3).

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4.2 Size and construction

4.2.1 Characteristics

The size and construction characteristics shall be indicated as follows:

Nominal section width	/	Nominal aspect ratio	Tyre construction code	Nominal rim diameter code

4.2.2 Nominal section width

The nominal section width shall be expressed in millimetres.

4.2.3 Nominal aspect ratio

The nominal aspect ratio shall be expressed as a percentage. It shall be a multiple of 10 for aspect ratios 80 and higher, and a multiple of 5 for aspect ratios lower than 80.

4.2.4 Tyre construction code

The tyre construction code shall be:

— “B” for bias-belted construction;

— “–” for diagonal-ply tyres; and

— “R” for radial-ply tyres.

NOTE 1 See also 4.4.3 for codes adopted for tyres suitable for speeds in excess of 240 km/h. Other codes will be established for new concepts (construction) of tyres.

NOTE 2 The term “bias-belted construction” describes a pneumatic tyre structure of diagonal (bias ply) type in which the carcass is restricted by a substantially inextensible circumferential belt.

NOTE 3 With reference to the definition of radial-ply tyre given in ISO 4223-1, for the purposes of this part of ISO 5751, “substantially at 90°” means angles between 65° and 90° as measured from the centreline of the tread.

4.2.5 Nominal rim diameter

The nominal rim diameter shall normally be expressed by a code (see Table 1). However, it shall be expressed in millimetres for new and future concepts where the application either of existing tyres on new-concept rims or of new-concept tyres on existing rims would be incompatible.

4.3 Service description

The characteristics shall be indicated as follows:

Load index **Speed symbol**

For load indices and speed symbols and their corresponding loads and speeds, see ISO 4223-1:2002, Tables A.1 and A.2.

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