
Bicycle tyres and rims —

Part 1:

Tyre designations and dimensions

Pneumatiques et jantes pour cycles —

Partie 1: Désignation et cotes des pneumatiques

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document 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 5775-1:2014), which has been technically revised.

The main changes are as follows:

- new definitions have been added for clarification in [Clause 3](#);
- the symbols and abbreviated terms have been revised in [3.2](#);
- new requirements have been added for clarification in [Clause 4](#).

A list of all parts in the ISO 5775 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Bicycle tyres and rims —

Part 1: Tyre designations and dimensions

1 Scope

This document specifies the designations and dimensions for the following pneumatic bicycle tyres:

- clincher tyres mounted on straight side or crotchet type rims;
- tubeless tyres;
- tubeless-ready tyres;
- tube-type tyres;
- “beaded edge” tyres mounted on hooked bead rims.

This document does not apply to tubular sew-up tyres and non-pneumatic tyres.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 5775-2:2021, *Bicycle tyres and rims — Part 2: Rims*

3 Terms, definitions, symbols and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4223-1, ISO 5775-2 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1.1

clincher tyre

tyre that has beads that lock onto the rim bead seat and/or rim hook when the tyre is inflated

3.1.1.1

tubeless tyre

TL

clincher tyre (3.1.1) that is functional without an inner tube or sealant to maintain inflation pressure

3.1.1.2

tubeless-ready tyre

TLR

clincher tyre (3.1.1) that is functional without an inner tube but requires sealant to maintain inflation pressure

3.1.1.3

tube-type tyre

clincher tyre (3.1.1) that is only functional with an inner tube to maintain inflation pressure

3.1.2

tubular sew-up tyre

completely enclosed tyre with or without an inner tube that is either glued or taped onto the rim

Note 1 to entry: All clincher tyre types defined in 3.1.1.1 to 3.1.1.3 may also be referred to as “open tubular tyre” if the tread is glued or vulcanized onto a non-vulcanized casing

3.2 Symbols and abbreviated terms

D_{design} design overall diameter

$D_{0,\text{max}}$ maximum overall diameter

R_{design} design rim width

R_{m} measuring rim width

S design section width

S_{min} minimum section width

S_{N} nominal section width

H_{design} design section height

W overall width

W_{max} maximum overall width

C crotchet type rim

SS straight-side type rim

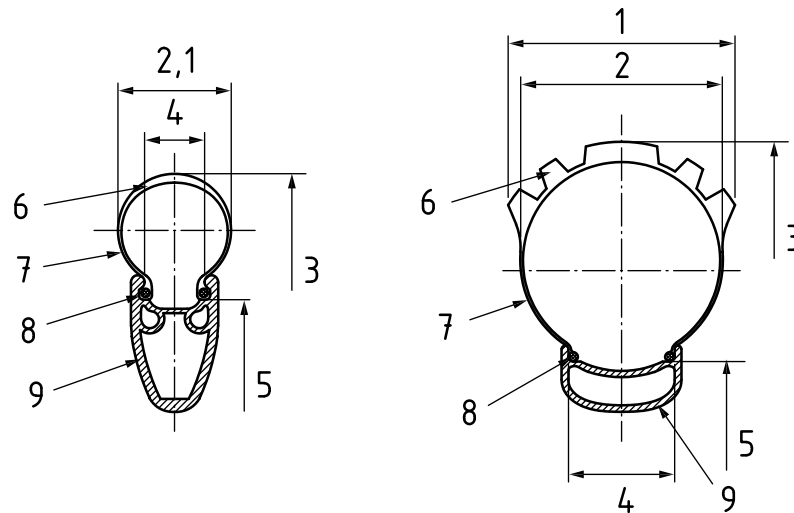
TC tubeless crotchet type rim

TSS tubeless straight-side type rim

4 Clincher tyres mounted on straight side or crotchet type rims

4.1 Tyre nomenclature

Tyre nomenclature is shown in [Figure 1](#).



Key

- 1 overall width (W)
- 2 section width (S)
- 3 overall diameter (D_0)
- 4 measuring rim width (R_m)
- 5 specified rim diameter (D)
- 6 tread
- 7 sidewall
- 8 bead
- 9 rim

Figure 1 — Sections of a cycle tyre showing components and nomenclature

4.2 Tyre size designation and marking

4.2.1 General

Clincher tyres shall be marked with the nominal size designation in accordance with 4.2.2. The other markings shall conform to 4.2.3 to 4.2.5.

4.2.2 Nominal size designation

4.2.2.1 General

The nominal size designation shall be indicated clearly visible on the side, even when the tyre is mounted as follows:

Nominal section width – Nominal rim diameter code

4.2.2.2 Nominal section width

The nominal section width is the designated inflated section width, the tyre is designed to measure on the design rim at maximum pressure. It shall be expressed in millimetres, as an integer number.

4.2.2.3 Nominal rim diameter code

The nominal rim diameter code reflects the nominal bead seat diameter of the rim, that the tyre is designed for. It shall be expressed in millimetres.

NOTE Nominal rim diameter codes are in ISO 5775-2:2021, Table 2.

4.2.3 Overall size designation

4.2.3.1 General

If the tyre size is characterized by a corresponding overall size designation, the overall size shall be designated as follows:

$$\text{Overall diameter code} \times \text{Overall width code}$$

4.2.3.2 Overall diameter code

The overall diameter shall be expressed as code. Refer to [Table 1](#) for the overall diameter code that corresponds to the nominal rim diameter code of the tyre.

Table 1 — Correspondence of nominal rim diameter code and overall diameter code

Nominal rim diameter code	Overall diameter code
203	12,5
254	14
305	16
349	16
355	18
406	20
507	24
559	26
584	27,5
622	29 ^{a)}

^{a)} For nominal section width 50 and below, overall diameter code 28 is accepted.

4.2.3.3 Overall width code

The overall width shall be expressed as code. Refer to [Table 2](#) for the correspondence of overall width code to the overall width expressed in millimetres.

Table 2 — Overall width code

Overall width mm	Overall width code
18	0,70
19	0,75
20	0,80
21	0,85
22	0,85
23	0,90
24	0,95
25	1,00

Table 2 (continued)

Overall width mm	Overall width code
26	1,00
27	1,05
28	1,10
29	1,15
30	1,20
31	1,20
32	1,25
33	1,30
34	1,35
35	1,40
36	1,40
37	1,45
38	1,50
39	1,55
40	1,55
41	1,60
42	1,65
43	1,70
44	1,75
45	1,75
46	1,80
47	1,85
48	1,90
49	1,95
50	2,00
51	2,00
52	2,00
53	2,10
54	2,10
55	2,20
56	2,20
57	2,20
58	2,30
59	2,30
60	2,40
61	2,40
62	2,40
63	2,50
64	2,50
65	2,60
66	2,60
67	2,60
68	2,70

Table 2 (continued)

Overall width mm	Overall width code
69	2,70
70	2,80
71	2,80
75	3,00
76	3,00
80	3,10
85	3,30
90	3,50
95	3,70
100	3,90
102	4,00
105	4,10
110	4,30
115	4,50
120	4,70
122	4,80
125	4,90
127	5,00
130	5,10
132	5,20

4.2.4 Old size marking

To help customers in those countries where other systems of marking were used, the old size marking may be separated by parentheses or “/” before or after the tyre size designation.

It is suggested that characters smaller than those used for the nominal size designation specified in [4.2.2](#) be adopted. See [Annex A](#) for correspondence between “nominal size designation” and “old size marking”. Sizes not included in [Annex A](#) shall bear the nominal size designation.

4.2.5 Other service characteristics

4.2.5.1 Tubeless marking

Tubeless tyres shall be marked with “TUBELESS” or “TL” clearly visible on the side, even when the tyre is mounted.

Tubeless-ready tyres shall be marked with “TUBELESS READY” or “TLR” clearly visible on the side, even when the tyre is mounted.

Tube-type tyres may be marked with “TUBE TYPE” clearly visible on the side, even when the tyre is mounted.

4.2.5.2 Directional arrow

In the case of a preferred direction of rotation of the tyre, an arrow may be shown clearly visible on the side, even when the tyre is mounted, to indicate that direction.

4.2.5.3 Marking of tyres designed for crotchet-type rims only

Tyres designed for crotchet-type rims only may be marked with “MOUNT ONLY ON HOOKED RIMS” or “MOUNT ONLY ON CROTCHET-TYPE RIMS”.

4.2.5.4 Pressure designation

The maximum inflation pressure shall be marked in kilopascals in multiples of 10. It may be marked in addition in bar and pound per square inch (PSI), where the PSI value shall be calculated by multiplying the kilopascal value by 0,145 and rounding the result down to the closest integer.

An additional maximum pressure for use on straight side type rims (SS/TSS) may be indicated. See [Table 3](#) for recommended maximum pressures for straight side type rims.

Table 3 — Maximum pressure for straight side type rims (SS/TSS)

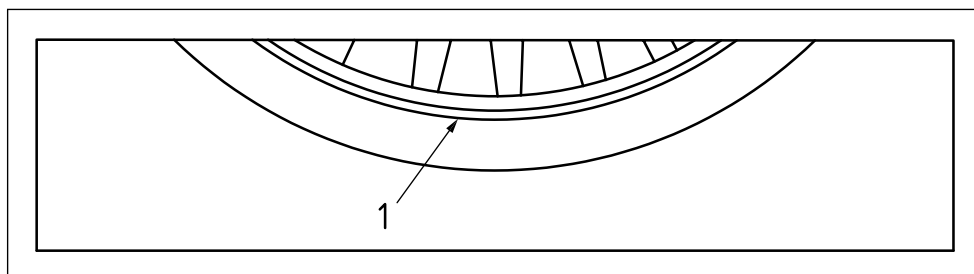
Nominal tyre section width S_N mm	Straight side type rim maximum pressure in service kPa
18 to 24	550
25 to 29	500
30 to 34	450
35 to 39	400
40 to 44	350
45 to 54	300
55 to 64	250
65 to 74	200
75 to 84	150

It is recommended that the deflection of the tyre in use does not exceed 30 % of the tyre section height at the minimum inflation pressure, if it is specified on the tyre.

See the examples in [4.2.6](#).

4.2.5.5 Rim line

A visible and concentric rim line indicator can be added to the tyre sidewall to show when the beads are fully seated (see [Figure 2](#)). If the rim line is not concentric with the rim edge, the bead is not fully seated.



Key

1 rim line

Figure 2 — Rim line