

DRAFT INTERNATIONAL STANDARD

ISO/DIS 5775-2

ISO/TC 31/SC 10

Secretariat: UNI

Voting begins on:
2020-07-01

Voting terminates on:
2020-09-23

Bicycle tyres and rims —

Part 2: Rims

Pneumatiques et jantes pour cycles —

Partie 2: Jantes

ICS: 43.150

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
<https://standards.iteh.ai/catalog/standards/sist/96b0ce1f-16a1-4bc5-8708-4c32b4b2ef7c/iso-dis-5775-2>

THIS DOCUMENT IS A DRAFT CIRCULATED FOR COMMENT AND APPROVAL. IT IS THEREFORE SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS AN INTERNATIONAL STANDARD UNTIL PUBLISHED AS SUCH.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

This document is circulated as received from the committee secretariat.



Reference number
ISO/DIS 5775-2:2020(E)

© ISO 2020

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
<https://standards.iteh.ai/catalog/standards/sist/96b0ce1f-16a1-4bc5-8708-4c32b4b2ef7c/iso-dis-5775-2>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2020

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword	iv
1 Scope	1
2 Symbols and abbreviated terms	1
3 Terms and definitions, general requirements	1
4 Straight-side type rims	2
4.1 Rim profile	2
4.2 Rim diameters	2
4.3 Designation and marking	2
5 Tubeless straight-side type rims	5
5.1 Rim profile	5
5.2 Rim diameters	5
5.3 Designation and marking	5
6 Hooked bead rims	7
6.1 Rim profile	7
6.2 Rim diameters and circumferences	7
6.3 Designation and marking	7
7 Crotchet type rims	8
7.1 Rim profile	8
7.2 Rim diameters	8
7.3 Designation and marking	8
8 Tubeless crotchet type rims	10
8.1 Rim profile	10
8.2 Rim diameters	10
8.3 Designation and marking	10
Annex A (informative) Methods for measuring and gauging bicycle rim dimensions	12

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 documents 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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 fourth edition cancels and replaces the third edition (ISO 5775-2:2016), which has been technically revised.

The main changes compared to the previous edition are as follows:

- [clause 2](#), revision of the symbols and abbreviated terms,
- [clause 3](#), addition of new definitions for clarification,
- new [clause 5](#), tubeless straight-side type rims, with or without humps,
- new [clause 8](#), tubeless crotchet type rims, with or without humps,
- [Annex A](#), simplification because there were a lot of redundancies and addition of precision for rim measurements with new tools.

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

Bicycle tyres and rims —

Part 2: Rims

1 Scope

The ISO 5775 part 2 specifies tyre fitting relevant geometrical dimensions and designations for straight-side (SS, TSS) type, hooked bead (HB) type and crotchet (C, TC) type bicycle rims.

The ISO 5775 part 1 specifies designations and dimensions for bicycle tyres.

2 Symbols and abbreviated terms

The following symbols are used in this part of ISO 5775:

<i>A</i>	Rim width
<i>D</i>	Specified rim diameter
<i>D</i> ₁	Measured rim diameter, corresponding to the tyre bead seat diameter
<i>D</i> ₂	External diameter
<i>D</i> _m	Measuring mandrel diameter
<i>G</i>	Flange height
<i>H</i> , <i>H</i> ₁	Unobstructed maximum well depth inclusive of base protection
<i>L</i>	Theoretical measuring tape length
<i>L</i> ₁	Well width inclusive of base protection
<i>P</i>	Bead seat width
<i>R</i> ₄	Well top radius
<i>W</i>	Measuring tape width
<i>C</i>	Crotchet type rim
<i>SS</i>	Straight-Side type rim
<i>TC</i>	Tubeless Crotchet type rim
<i>TSS</i>	Tubeless Straight-Side type rim

3 Terms and definitions, general requirements

3.1

Rim contour

The rim shall have a smooth contour, free of sharp edges. The internal surface of the bottom well and the flange edge shall guarantee a smooth surface in order to not damage the tyre.

3.2

Rim valve hole

The rim valve hole shall be placed such that a rim base protection may be applied, an inner tube may be used, and a tyre safely installed or removed. On the tyre side of the rim, the edges shall be rounded or chamfered. On the weather side of the rim (area of the rim which is not covered by the tyre), the edges shall be free from burrs which could damage the valve or the inner tube.

3.3

Rim Base

The tyre side portion of the rim profile which comes into contact with tyre beads during mounting, inflation and use

3.4

Rim base protection

The rim base protection is required for rims featuring through-drilled spoke holes on the tyre side. Width and thickness of the rim base protection shall be chosen in a way to guarantee the complete covering of the spoke nipple heads and spoke holes during use, as well as a stable lateral fit, and to permit satisfactory fitting of the tyre and the inner tube. For tubeless applications with through-drilled spoke holes, the rim base protection must provide an air-tight seal adequate for the maximum allowable pressure as recommended by the rim manufacturer.

3.5

Rim, weather side

The portion of the rim profile exposed to ambient weather conditions.

3.6

Rim, tyre side

The portion of the rim profile used for tyre mounting and retention.

3.7

Other requirements

All rim dimensions refer to a built wheel with rim base protection, ready to mount a tyre. The rim manufacturer shall therefore specify a rim base protection, considering all the rim profile dimensions relating to tyre mounting, inflating and use. The dimension H or H_1 , in conjunction with dimension L_1 , defines a minimum unobstructed space above the rim base or the rim base protection, if used, designed to permit satisfactory tyre fitment. The dimension H or H_1 must be varied at the discretion of rim manufacturers to achieve the above objective. It is recommended that rims having a measured rim diameter D_1 , below 400mm should have a well depth H 1mm deeper.

4 Straight-side type rims

4.1 Rim profile

Dimensions and tolerances of straight-side (SS) type rims are specified in [Figure 1](#) and [Table 1](#).

Straight-side type rims shall be used with non-foldable tyres (rigid bead tyres) only.

4.2 Rim diameters

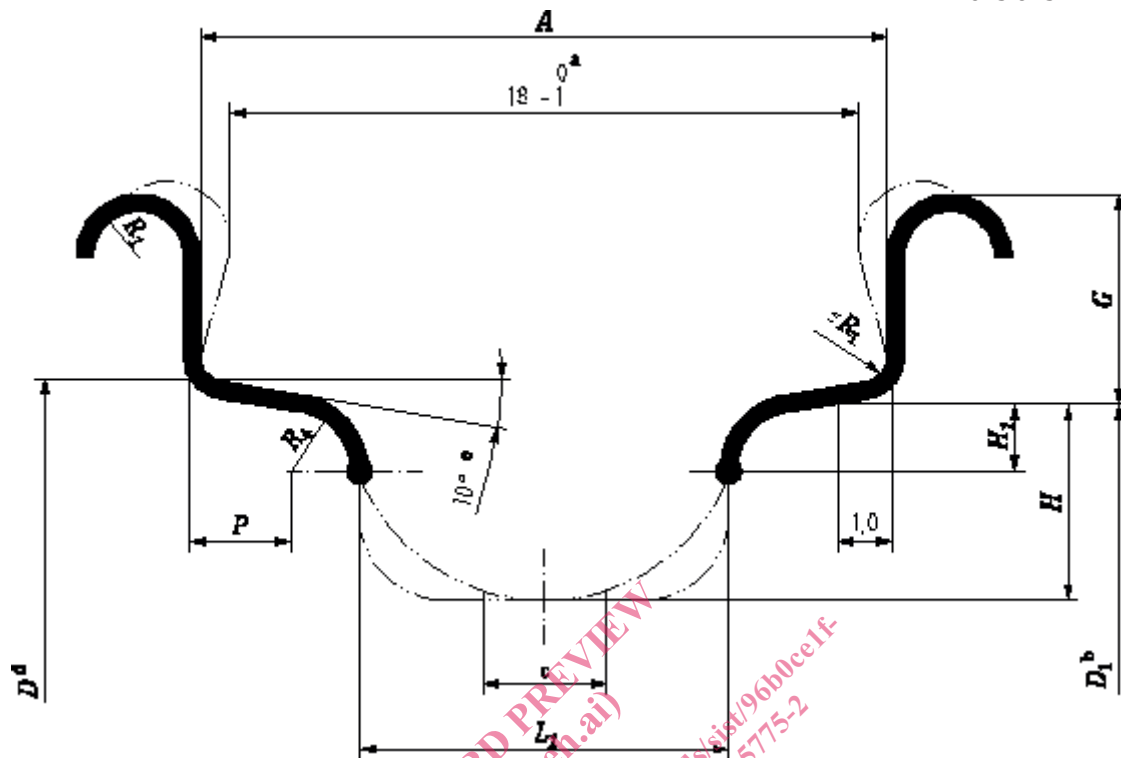
The nominal rim diameter code specified rim diameters and measured rim diameters for straight-side (SS) type rims are specified in [Figure 1](#) and [Table 2](#).

4.3 Designation and marking

A straight-side (SS) type rim shall be designated by its nominal rim diameter code and its nominal width code, followed by "SS" for straight-side and the reference to the ISO standard.

EXAMPLE 400 × 20SS (ISO 5775)

Dimensions in millimetres



Key

- a 18₋₁^a (Rim 18 only).
- b Measured rim diameter.
- c Valve holes 6,2^{+0,3/+0}; 8,3^{+0,3/+0}.
- d Specified rim diameter.
- e Allowed 5° to 15° (5° to 25° in case of rolled rims with nominal rim diameter 400 and smaller).

Figure 1 — Straight-side type rims

Table 1 — Dimensions of straight-side type rims

Dimensions in millimetres

Width code	A ±1	G ±0,5	H ₁		L ₁ min	P min	R ₁ min	R ₄ min
			min	max				
16	16	5,5	1,8	6	9	1,5	1	1,5
18 ^e	18	6,5	1,8	6	10	1,8	1,5	1,5
20	20	6,5	2	6,5	11	2	1,8	1,5
22	22	6,5	3	7,5	11	2,2	1,8	2
24	24	7	3	7,5	11	3	2	2,5
27	27	7,5	3,5	8	14	3,5	2,5	2,5
30,5	30,5	8	3,5	8	14	3,5	2,5	2,5

Table 2 — Specified and measured rim diameters for straight-side type rims and crotchet type rims

Dimensions in millimetres

Nominal diameter code	Specified rim diameter D	Measured rim diameter $D_1 \pm 0,5$
194	194,2	193,85
203	203,2	202,85
222	222,2	221,85
239	239,4	239,05
248	247,6	247,25
251	250,8	250,45
279	279,2	278,85
288	287,8	287,45
298	298,4	298,05
305	304,7	304,35
317	317,0	316,65
330	329,8	329,45
337	336,6	336,25
340	339,6	339,25
349	349,2	348,85
355	355,0	354,65
357	357,1	356,75
369	368,6	368,25
381	380,9	380,55
387	386,6	386,25
390	389,6	389,25
400	400,1	399,75
406	405,6	405,25
419	418,6	418,25
428	428,1	427,75
432	431,6	431,25
438	437,9	437,55
440	439,9	439,55
451	450,8	450,45
457	457,0	456,65
484	484,0	483,65
489	488,6	488,25
490	490,2	489,85
498	497,5	497,15
501	501,3	500,95
507	507,3	506,95
520	520,2	519,85
531	530,6	530,25
534	533,5	533,15
540	539,6	539,25
541	540,8	540,45

The tolerance on the measured bead seat circumference ($\pi \times$ measured rim diameter) is $\pm 1,57$ mm.

Table 2 (continued)

Nominal diameter code	Specified rim diameter D	Measured rim diameter $D_1 \pm 0,5$
547	546,5	546,15
559	558,8	558,45
565	564,9	564,55
571	571,0	570,65
584	583,9	583,55
590	590,2	589,85
597	597,2	596,85
609	609,2	608,85
622	622,3	621,95
630	629,7	629,35
635	634,7	634,35
642	641,7	641,35

The tolerance on the measured bead seat circumference ($\pi \times$ measured rim diameter) is $\pm 1,57$ mm.

5 Tubeless straight-side type rims

5.1 Rim profile

Dimensions and tolerances of tubeless straight-side (TSS) type rims are specified in [Figure 2](#) and [Table 3](#).

Tyres that are labelled with “tubeless” or “tubeless ready” can be used without inner tube. Tyres that are not labelled accordingly shall be used with an inner tube.

5.2 Rim diameters

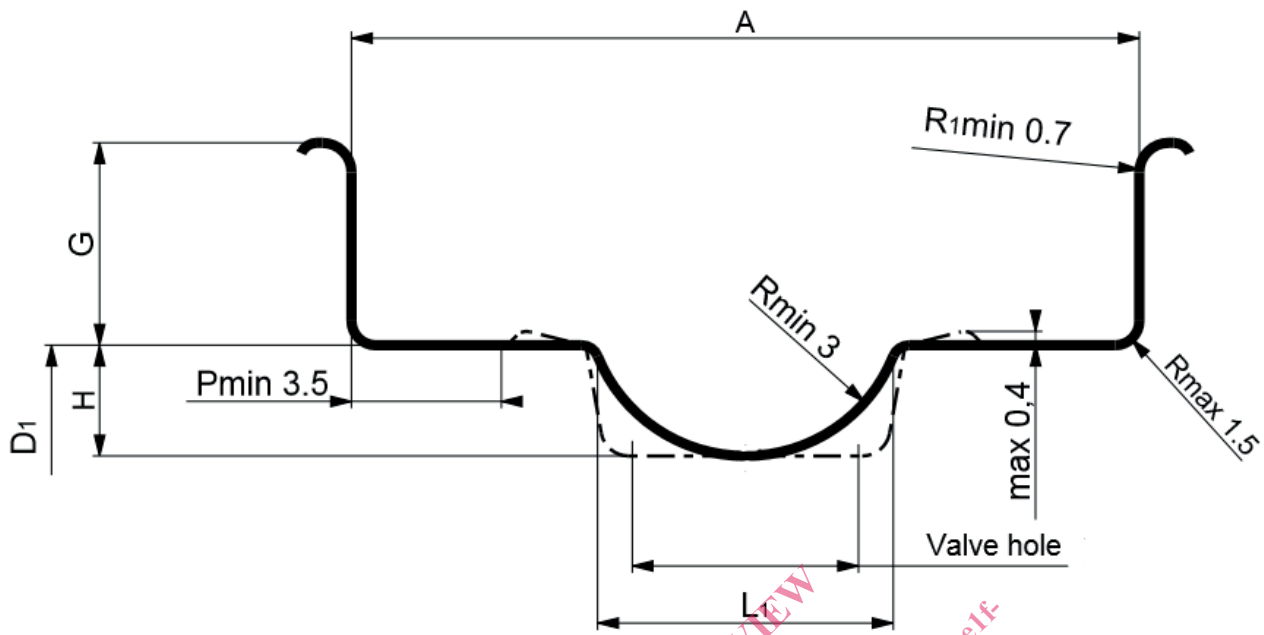
The nominal rim diameter code and measured rim diameters for tubeless straight-side (TSS) type rims are specified in [Table 4](#). Measured rim diameter, D_1 , is depicted in [figure 2](#).

5.3 Designation and marking

Tubeless straight-side (TSS) type rims shall be designated by its nominal rim diameter code and its nominal width code, followed by “TSS” and the reference to the ISO standard.

EXAMPLE 622 × 25TSS (ISO 5775). 25TSS x 622 is also accepted.

Dimensions in millimetres



The tyre bead seat must be parallel to the rotational axis of the wheel.

NOTE Multiple rim wells to accommodate each tyre bead and positioned out of the rim center, are allowed.

Figure 2 — Tubeless straight-side type rims

Table 3 — Dimensions of tubeless straight-side type rims

in millimetres

Rim profile	Dimensions				
	A ±0,5	G ±0,5	H		L ₁ min
			min	max	
19 TSS	19	6	2,9	3,5	7
20 TSS	20	6	2,9	3,5	7
...	...	6	2,9	3,5	7
100 TSS	100	6	2,9	3,5	7

NOTE: it is recommended that the ratio G/H<1,9.

Table 4 — Measured rim diameters for tubeless straight-side type rims and tubeless crotchet type rims

Dimensions in millimetres

Nominal diameter code	Measured rim diameter $D_1 \pm 0,5$
559	559
584	584,1
622	621,95