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Bicycle tyres and rims —

Part 2: Rims

*Pneumatiques et jantes pour cycles —
Partie 2: Jantes*



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Bicycle tyres and rims —

Part 2: Rims

0 Introduction

This International Standard specifies the main requirements for bicycle tyres and rims. Part 1 covers designations and dimensions for tyres.

1 Scope and field of application

This part of ISO 5775 specifies rim dimensions for bicycle tyres: it gives only those rim contour dimensions necessary for tyre mounting and to fit the tyre on the rim.

ISO 5775-1 and ISO 5775-2 cover straight side (SS) rims, hooked bead (HB) rims and crotchet type (CT) rims.

The annex presents methods for checking dimensions of straight side rims and hooked bead rims.

2 Reference

ISO 5775-1, *Bicycle tyres and rims — Part 1: Tyre designations and dimensions*.

3 Requirements

3.1 Rim contour

The rim shall have a smooth contour, free of sharp edges, on the side of the tyre.

3.2 Rim valve hole

The rim valve hole shall be centred on the bottom of the rim well. On the tyre side, the edges shall be rounded or chamfered. On the hub side, the edges shall be free from burrs which could damage the valve.

3.3 Specific requirements

Designations and dimensions for straight side rims, hooked bead rims and crotchet type rims are given in sections one, two and three, respectively.

3.4 Symbols

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

A	Specified rim width
A_1	Rim width at the tyre bead seat
D	Specified rim diameter
D_1	Measuring rim diameter
D_2	Outer diameter
G	Flange height
H_1	Unobstructed minimum depth above rim base with rim tape fitted to permit tyre fitment
L_1	Well width above rim tape
P	Bead seat width
R_2	Flange radius
R_3	Bead seat radius
R_4	Well radius top
W	Measuring tape width
β	Bead seat angle

Table 2 — Specified and measuring rim diameters for straight side rims

Dimensions in millimetres

Nominal rim diameter code	Specified rim diameter D	Measuring rim diameter ¹⁾ D_1
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	316,65
330	329,8	329,45
337	336,6	336,25
340	339,6	339,25
349	349,2	348,85
355	355	354,65
357	357,1	356,75
369	368,6	368,25
381	380,9	380,55
387	387,1	386,75
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	437,7	437,35
440	439,9	439,55
451	450,8	450,45
484	484	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
547	546,5	546,15
559	558,8	558,45
565	564,9	564,55
571	571	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

1) The tolerance on the measured bead seat circumference ($\pi \times$ measuring rim diameter) is $\pm 1,5$ mm.

Table 4 — Specified rim diameters and circumferences for hooked bead rims

Dimensions in millimetres

Nominal rim diameter code ¹⁾	Specified rim diameter D	Specified rim circumference, πD $\pm 2,5$
HB 270	269,9	847,9
HB 321	320,7	1 007,5
HB 372	371,5	1 167,1
HB 422	422,3	1 326,7
HB 459	458,8	1 441,4
HB 473	473,1	1 486,3
HB 510	509,6	1 601
HB 524	523,9	1 645,9
HB 560	560,4	1 760,6
HB 575	574,7	1 805,5
HB 611	611,2	1 920,1

1) HB denotes hooked bead rim: the number following HB is the rim code.

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Annex

Methods for measuring and gauging bicycle rim dimensions

(for information)

A.1 Purpose

This annex gives methods for measuring and gauging dimensions of straight side rims and hooked bead rims.

A.2 General

All measurements shall be made on rims ready for tyre mounting and placed on flat surfaces. For accurate measurements, gauges and tapes shall always be set perpendicular to the rim flanges on both bead seats.

A.3 Main rim dimensions to be measured and gauged

The main rim dimensions which shall be measured and gauged are indicated in figures 4 and 5.

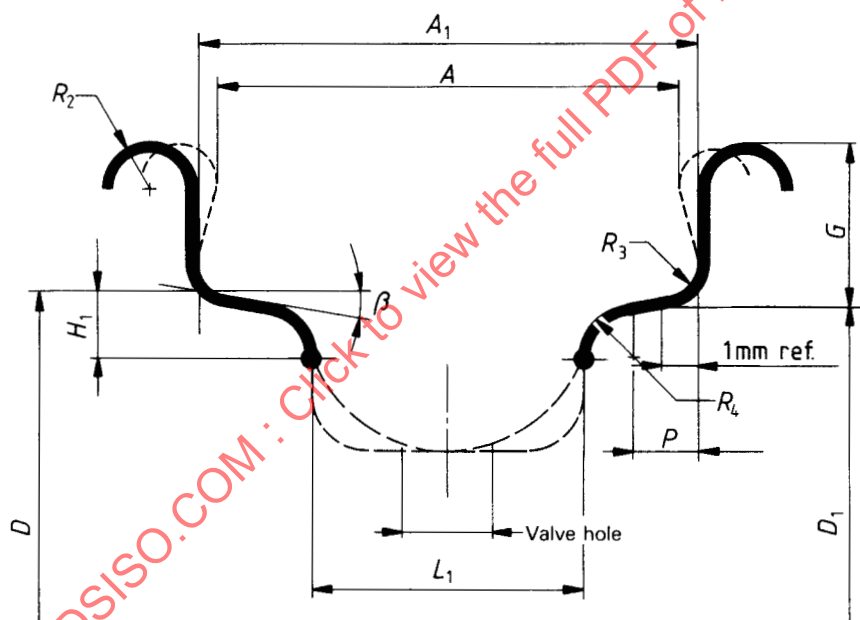


Figure 4 — Straight side rims

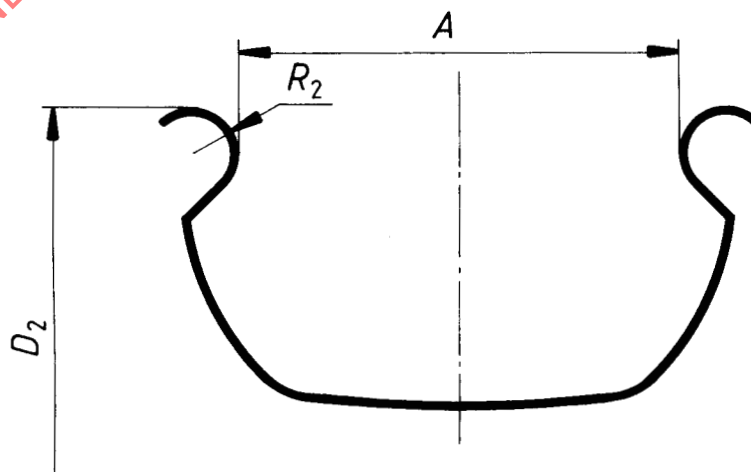


Figure 5 — Hooked bead rims

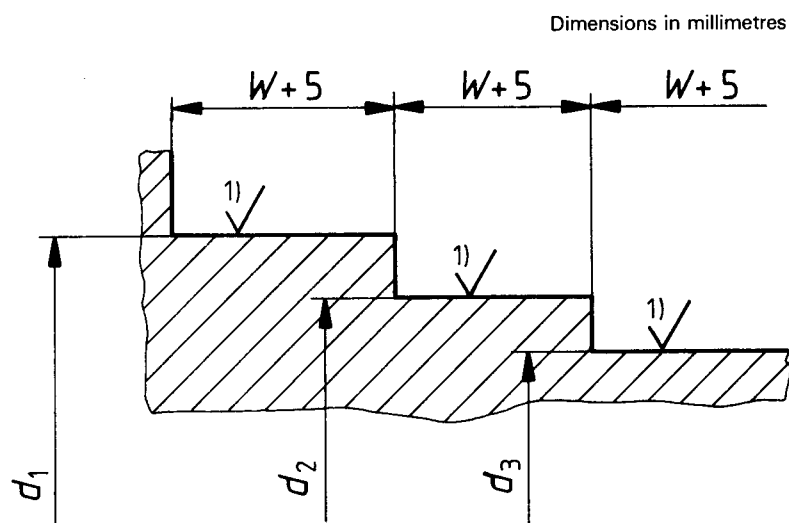


Table 6 — Rim and tape widths

Dimensions in millimetres

Rim width	Tape width, W'
	0 -0,1
18	16
20	18
22	20
24	22
27	25
30,5	28,5

1) Surface roughness value at the discretion of the person checking.

Tol. d_1, d_2, d_3 : $\begin{smallmatrix} 0 \\ -0,05 \end{smallmatrix}$

Figure 8 — Tape mandrel

A.4.2 Second method

The circumference of the upper part of both flanges is measured by means of a inextensible steel tape-line (10 mm width, and 0,3 mm thickness with 0,5 mm graduations), care being taken that it contacts the rim. The two outer circumference measurements U_{0A} and U_{0B} are recorded.

Using an appropriate vernier gauge (see figure 9), measure the height of both flanges at least at four points equally spaced around the circumference taking care that the correct protusion (1 mm for cycle rims) is used. Calculate the average of the height for the two flanges G_A and G_B .

Calculate the measured circumference (U_{1A}) using the equations:

$$U_{1A} = U_{0A} - 2\pi G_A$$

$$U_{1B} = U_{0B} - 2\pi G_B$$

Compare both circumferences with πD_1 values shown in ISO 5775-1.

NOTE — When rims have a difference of more than 2 mm between the two outer circumferences U_{0A} and U_{0B} , the vernier gauge should be appropriately applied and a spacer with a thickness, δ , catering for the difference in circumference inserted (see figure 9).

$$\delta = \frac{|U_{0A} - U_{0B}|}{2\pi}$$

The spacer should be interposed between the top of the shorter flange and the vernier gauge as shown in figure 10.