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## Bicycle tyres and rims —

### Part 2: Rims

*Pneumatiques et jantes pour cycles —*

*Partie 2: Jantes*

[Revision of second edition (ISO 5775-2:1996) and ISO 5775-2:1996/Amd.1:2001]

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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.

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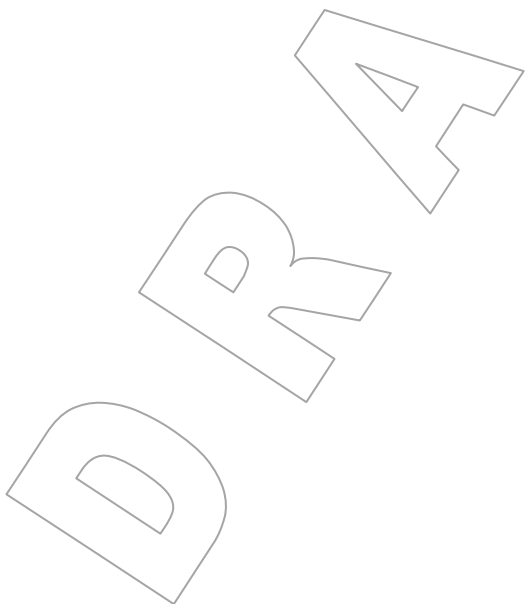
ISO 5775-2 was prepared by Technical Committee ISO/TC 31, *Tyres, rims and valves*, Subcommittee SC 10, *Cycle, moped, motorcycle tyres and rims*.

This second/third/... edition cancels and replaces the first/second/... edition (ISO 5775-2:1996), [clause(s) / subclause(s) / table(s) / figure(s) / annex(es)] of which [has / have] been technically revised.

ISO 5775 consists of the following parts, under the general title *Bicycle tyres and rims*:

- *Part 1: Tyre designations and dimensions*
- *Part 2: Rims*

Annex A of this part of ISO 5775 is for information only.



# Bicycle tyres and rims — Part 2: Rims

## 1 Scope

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 covers designations and dimensions for tyres.

ISO 5775-2 covers straight side (SS) rims, hooked bead type (HB) rims and crotchet type (C) rims.

## 2 Symbols and abbreviated terms

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

$A$	Rim width
$D$	Specified rim diameter
$D_1$	Measured rim diameter
$D_2$	External diameter
$G$	Flange height
$H, H_1$	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
$R_1, R_2$	Flange radius
$R_4$	Well top radius
$W$	Measuring tape width

## 3 General requirements

### 3.1 Rim contour

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

### 3.2 Rim valve hole

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

### 3.3 Specific requirements

Designation and dimensions for straight side rims, hooked bead type rims and crotchet type rims are given in clause 4, 5 and 6 respectively.

Width and thickness of rim base protection has to be chosen in such a way as to guarantee the complete covering of the spoke heads and spoke holes during use, as well as a stable lateral fit, and to permit satisfactory fitting of the tyre and the tube.

## 4 Straight side rims

### 4.1 Rim contour

Dimensions and tolerances of straight side (SS) rims has to be given in Figure 1 and Table 1.

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

### 4.2 Rim diameter

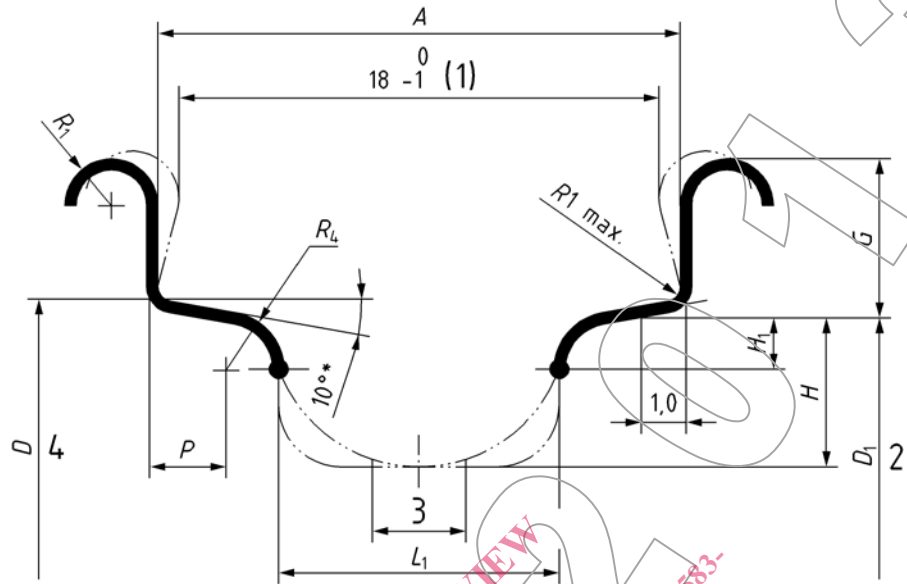
The nominal rim diameter code, specified rim diameters and measuring rim diameters for straight side (SS) rims has to be given in Figure 1 and Table 2.

### 4.3 Designation and marking

A straight side (SS) rim has to be designated by its nominal rim diameter code and its nominal width code, optionally preceded by "SS" for straight side.

Example        SS 400 × 20

Dimensions in millimetres



**Key**

- 1  $18 \begin{smallmatrix} 0 \\ -1 \end{smallmatrix}$  (Rim 18 only)
- 2 Measuring Rim diameter
- 3 Valve holes 6.2A; 6.2C; 8.3A and 8.3C
- 4 Specified Rim diameter

NOTE Allowed 5° to 15° (5° to 25° in case of rolled rims with nominal rim diameter 400 and smaller)

**Figure 1 — Straight side rims**

**Table 1 — Dimensions of straight side rims**

Dimensions in millimetres

Width code	A ± 1	G ± 0,5	H <sub>1</sub> <sup>a b</sup>		L <sub>1</sub> <sup>b</sup> min	P min	R <sub>1</sub> min	R <sub>4</sub> min
			min	max				
16	16	5,5	1,8	6	9	1,5	1	1,5
18 <sup>c</sup>	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

<sup>a</sup> It is recommended that the contour of rims having a specified diameter below 400 mm should have well depth H<sub>1</sub> 1 mm deeper.

<sup>b</sup> The dimension H<sub>1</sub>, in conjunction with dimension L<sub>1</sub>, defines a minimum unobstructed space above the rim base and the nipple heads with the rim base protective flap fitted to permit satisfactory tyre fitment. The dimension H<sub>1</sub>, is to be varied as the discretion of rim manufacturers to achieve the above objective.

<sup>c</sup> Previously known as rim with code 17

**Table 2 — Specified and measuring ring rim diameters for straight side rims and crotchet type rims**

Dimensions in millimetres

Nominal diameter code	Specified rim diameter <i>D</i>	Measuring rim diameter $D_1 \pm 0,5^a$
203	203,2	202,85
305	304,7	304,35
355	355,5	354,65
387	386,6	386,25
406	405,6	405,25
438	437,9	437,55
457	457,0	456,65
489	488,6	488,25
507	507,3	506,95
540	539,6	539,25
559	558,8	558,45
571	571,0	570,65
584	583,9	583,55
590	590,2	589,85
622	622,3	621,95
630	629,7	629,35
635	634,7	634,35

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

The mandrel diameter ( $D_m^{+0}_{-0,05}$ ) related to the First Method is equal to the measuring rim diameter  $D_1$ . The theoretical tape length, including the maximum tolerance on the bead set circumference, can be computed from  $L = \pi (D_1 + 0,3) + 2,0$  and is related to the flat tape at 20 °C (See A.4).

## 5 Hooked bead rims

### 5.1 Rim contours

Dimensions and tolerances of hooked bead (HB) rims has to be as given in Figure 2 and table 3.

### 5.2 Rim diameters and circumferences

The nominal rim diameter code, specified rim diameters and measuring circumferences for hooked bead (HB) rims has to be as given in Figure 2 and Table 4.

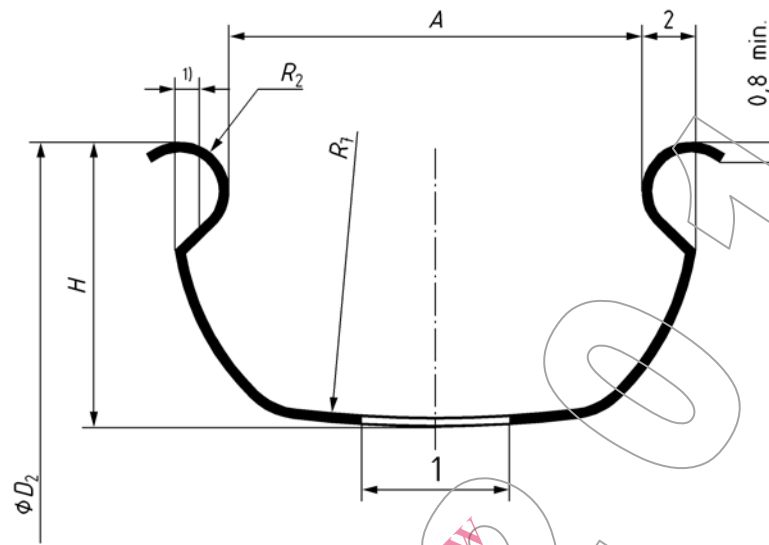
### 5.3 Designation and marking

A hooked bead (HB) rim has to be designated by its nominal rim diameter code and its nominal width code, preceded by "HB" for hooked bead.

EXAMPLE HB 422 x 25



Dimensions in millimetres



**Key**

- 1 Valve hole
- 2 Optional opening not to exceed 1 mm.

Figure 2 — Hooked bead rims

Table 3 — Dimensions of hooked bead rims

Dimensions in millimetres

Nominal rim width	$A$ $\pm 1$	$H$ min	$R_2$ $\pm 0,5$	$R_7$ min
20	20	13	2	30
25	27	14	2	50
27	27	15	2	70

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

Dimensions in millimetres

Nominal rim diameter code	Specified rim diameter <i>D</i>	Specified rim circumference, $\pi D$ $\pm 2,5$
HB270	269,9	847,9
HB321	320,7	1 007,5
HB372	371,5	1 167,1
HB422	422,3	1 326,7
HB459	458,8	1 441,4
HB473	473,1	1 486,3
HB510	509,6	1 601
HB524	523,9	1 645,9
HB560	560,4	1 760,6
HB575	574,7	1 805,5
HB611	611,2	1 920,1

HB denotes hooked bead rim; the number following HB is the rim code.

## 6 Crotchet type rims

### 6.1 Rim contours

Dimensions and tolerances of crotchet type (C) rims has to be as given in Figure 3 and Table 5.

Crotchet type rims can be used with rigid and foldable bead tyres.

### 6.2 Rim diameters

The nominal rim diameter code, specified rim diameters and measuring rim diameters for crotchet type (C) rims has to be given in Figure 3 and Table 2.

### 6.3 Designation and marking

A crotchet type (C) has to be designated by its nominal rim diameter code and its nominal width code, followed by "C" for crotchet type.

Example : 622 x 13C.