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МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Narrow and wide base off-road tyres and rims —

Part 3: Rims

Pneumatiques et jantes à base étroite et à base large pour engins de génie civil —

Partie 3: Jantes

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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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 4250-3 was prepared by Technical Committee ISO/TC 31, *Tyres, rims and valves*.

This first edition and the first editions of ISO 4250-1 and ISO 4250-2 cancel and replace ISO/TR 4250 : 1980, the three parts together constituting a technical revision.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

Narrow and wide base off-road tyres and rims —

Part 3 : Rims

0 Introduction

ISO 4250 provides technical details on the designation and dimensions of off-road tyres and rims, as well as load ratings for these types of tyres.

This International Standard consists of three parts :

Part 1 : Tyre designations and dimensions.

Part 2 : Loads and inflation pressures.

Part 3 : Rims.

1 Scope

This part of ISO 4250 sets out the designation, contour and dimensions for rims for narrow and wide base off-road tyres.

2 Field of application

This part of ISO 4250 applies to rims primarily intended for off-road machines.

3 Rim identification

3.1 Codes shall be used to identify :

- specified rim diameter, D_s (see table 7);
- nominal width between flanges;
- nominal flange height or rim profile designations.

3.2 The rim markings shall consist of codes for :

- specified rim diameter, D_s ;
- nominal width between flanges : the markings shall be on the weather side of the rim, and visible when the tyre is mounted.

3.3 Where a disc is fitted by the rim/wheel manufacturer, the marking shall appear on either the disc or rim base.

3.4 Loose flanges shall be marked on an externally visible surface. The marking shall indicate nominal height and nominal diameter.

4 Rim contours

Rim contours are given in figures 1 to 4 and tables 1 to 4.

5 Rim knurling

Rim knurling details are given in figure 5, and tables 5 and 6.

6 Rim loads and inflations

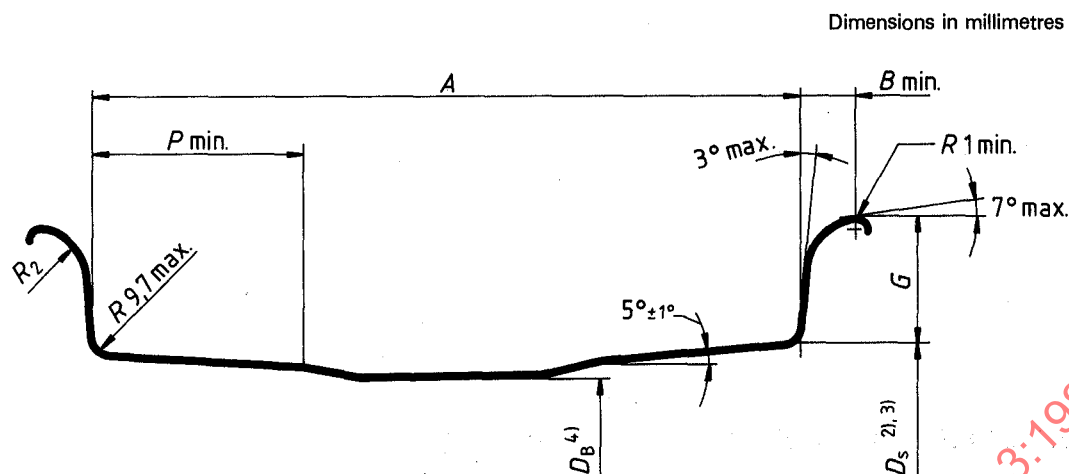
The load and inflation pressure imposed on the rim and wheel shall not exceed the rim and wheel manufacturer's recommendations, even though the tyre may be approved for a higher load or inflation. Consult the rim and wheel manufacturer to determine if rim and wheel capacities are adequate for the intended service.

7 Rim dimensions

Rim dimensions are standardized for size and contour only, and for particular tyre and rim combinations designated to ensure proper mounting and fit of the tyre to the rim.

8 Bibliography

ISO 3911, *Wheels/rims — Nomenclature, designation, marking and units of measurement*.

Figure 1 — Contours of 5° full tapered bead seat rims¹⁾

1) Flange and bead seat shall be removable on one side.

2) The tolerance given for the specified rim diameter, D_s , [see note 3)] is for tyre design purposes only. The actual rim measurement by circumference is established by using a mandrel and a tape.

3) Rim diameter codes applicable to this figure and table are 21, 25, 29, 33, 35, 39, 43, 45, 49, 51 and 57.

For codes < 49, D_s tolerance: $\begin{smallmatrix} +0,4 \\ -0,8 \end{smallmatrix}$

For codes > 49, D_s tolerance: $\begin{smallmatrix} +0,8 \\ -0,8 \end{smallmatrix}$

4) For codes < 49, $D_B = D_s - 25,4 \begin{smallmatrix} +0,4 \\ -12,7 \end{smallmatrix}$

For codes > 51, $D_B = D_s - 50,8 \begin{smallmatrix} +0,4 \\ -12,7 \end{smallmatrix}$

Table 1 — Contours of 5° full tapered bead seat rims

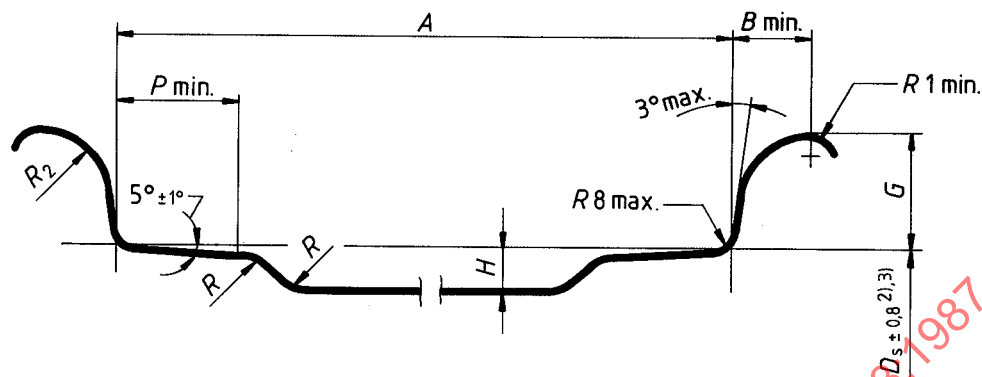
Dimensions in millimetres

Rim width code/flange height	A		G		B	P	R ₂	
		tol.		tol.	min.	min.		tol.
11.25/2.0	285,8	± 12,7	50,8	± 1,6	31,5	101,0	31,8	± 1,5
13.00/2.5	330,2	± 12,7	63,5	± 1,6	44,5	101,0	38,1	± 1,5
13.00/2.75 ¹⁾	330,2	± 12,7	69,9	± 1,6	47,5	101,0	47,6	± 1,5
15.00/3.0	381,0	± 12,7	76,2	± 1,6	54,0	101,0 ²⁾	44,5	± 1,5
15.00/3.0-49	381,0	± 12,7	76,2	± 1,6	54,0	101,0 ²⁾	50,8	± 1,8
17.00/2.0	431,8	± 12,7	50,8	± 1,6	31,5	101,0	31,8	± 1,5
17.00/3.5	431,8	± 12,7	88,9	± 1,6	57,0	139,0	50,8	± 1,8
19.50/2.5	495,3	± 12,7	63,5	± 1,6	44,5	101,0	38,1	± 1,5
19.50/4.0	495,3	± 12,7	101,6	± 1,6	65,0	139,0	57,2	± 1,8
22.00/3.0	558,8	± 12,7	76,2	± 1,6	54,0	139,0	44,5	± 1,5
22.00/4.0	558,8	± 12,7	101,6	± 1,6	65,0	139,0	57,2	± 1,8
22.00/4.5	558,8	± 12,7	114,3	± 1,6	73,0	139,0	63,5	± 1,8
22.00/4.5-51	558,8	± 12,7	114,3	± 1,6	73,0	190,5	63,5	± 1,8
24.00/3.0	609,6	± 12,7	76,2	± 1,6	54,0	139,0	44,5	± 1,5
24.00/5.0	609,6	± 12,7	127,0	± 1,6	85,5	190,5	69,9	± 1,8
25.00/3.5	635,0	± 12,7	88,9	± 1,6	57,0	139,0	50,8	± 1,8
26.00/5.0-51	660,4	± 12,7	127,0	± 1,6	85,5	190,5	69,9	± 1,8
27.00/3.5	685,8	± 12,7	88,9	± 1,6	57,0	139,0	50,8	± 1,8
28.00/3.5	711,2	± 12,7	88,9	± 1,6	57,0	139,0	50,8	± 1,8
28.00/4.0	711,2	± 12,7	101,6	± 1,6	65,0	139,0	57,2	± 1,8
29.00/6.0	736,6	± 12,7	152,4	± 1,6	96,5	190,5	83,8	± 2,4
31.00/4.0	787,4	± 12,7	101,6	± 1,6	65,0	139,0	57,2	± 1,8
32.00/4.0	812,8	± 12,7	101,6	± 1,6	65,0	139,0	57,2	± 1,8
32.00/4.5	812,8	± 12,7	114,3	± 1,6	73,0	139,0	63,5	± 1,8
36.00/4.5	914,4	± 12,7	114,3	± 1,6	73,0	139,0	63,5	± 1,8
40.00/4.5	1 016,0	± 12,7	114,3	± 1,6	73,0	139,0	63,5	± 1,8

1) For rim diameter code > 49.

2) 117,5 for diagonal 32 ply rating and higher.

Dimensions in millimetres

Figure 2 — Contours of semi-drop centre rims¹⁾

- 1) Flange and bead seat shall be removable on one side.
- 2) The tolerance given for the specified rim diameter, D_s , is for tyre design purposes only. The actual rim measurement by circumference is established by using a mandrel and a tape.
- 3) Rim diameter code applicable to this figure and table is 25.

Table 2 — Contours of semi-drop centre rims

Dimensions in millimetres

Rim width code/flange height	A $\pm 6,4$	B min.	G $\pm 1,2$	P min.	H min.	R_2 $\pm 1,3$
12.00/1.3 SDC	304,8	24,5	33,0	47,0	7,2	22,9
14.00/1.3 SDC	355,6	24,5	33,0	47,0	7,2	22,9

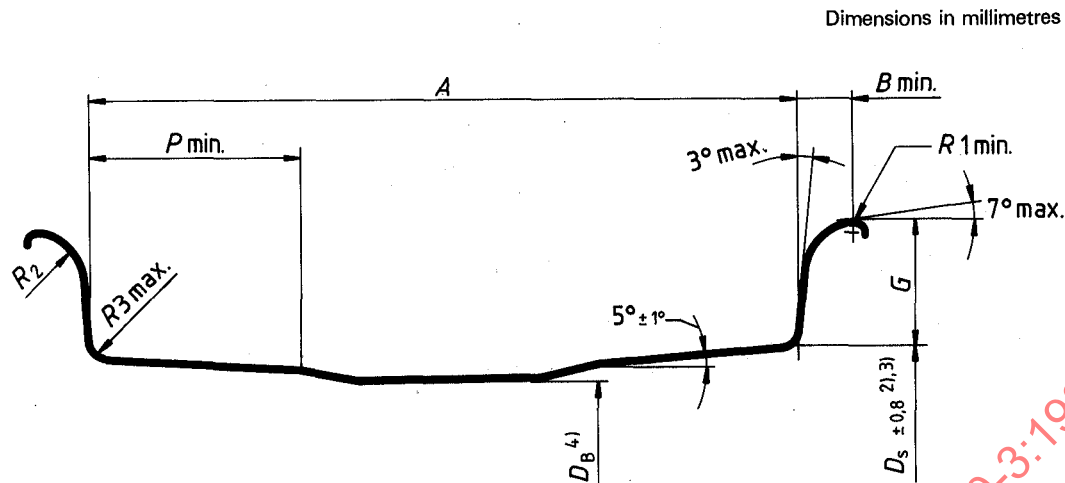


Figure 3 — Contours of 5° full tapered bead seat rims¹⁾

- 1) Flange and bead seat shall be removable on one side.
- 2) The tolerance given for the specified rim diameter, D_s , is for tyre design purposes only. The actual rim measurement by circumference is established by using a mandrel and a tape.
- 3) Rim diameter codes applicable to this figure and table are 21 and 25.
- 4) $D_B = D_s - 25,4$
For rims 8.50/1.3 and 10.00/1.5, tol. $\begin{matrix} +0,4 \\ -6,4 \end{matrix}$
For larger rims, D_B tol. $\begin{matrix} +0,4 \\ -12,7 \end{matrix}$

Table 3 — Contours of 5° full tapered bead seat rims

Dimensions in millimetres

Rim width code/flange height	A		B min.	G		P min.	R_2 $\pm 1,3$	R_3 max.
		tol.			tol.			
8.50/1.3	215,9	$\pm 4,8$	24,5	33,0	$\pm 1,2$	50,0	22,9	8,0
10.00/1.5	254,0	$\pm 4,8$	27,0	38,1	$\pm 1,2$	59,0	25,4	8,0
12.00/1.3	304,8	$\pm 6,4$	24,5	33,0	$\pm 1,2$	47,0	22,9	9,7
14.00/1.5	355,6	$\pm 6,4$	27,0	38,1	$\pm 1,2$	59,0	25,4	9,7
17.00/1.7	431,8	$\pm 12,7$	24,5	43,2	$\pm 1,6$	60,0	22,9	8,0

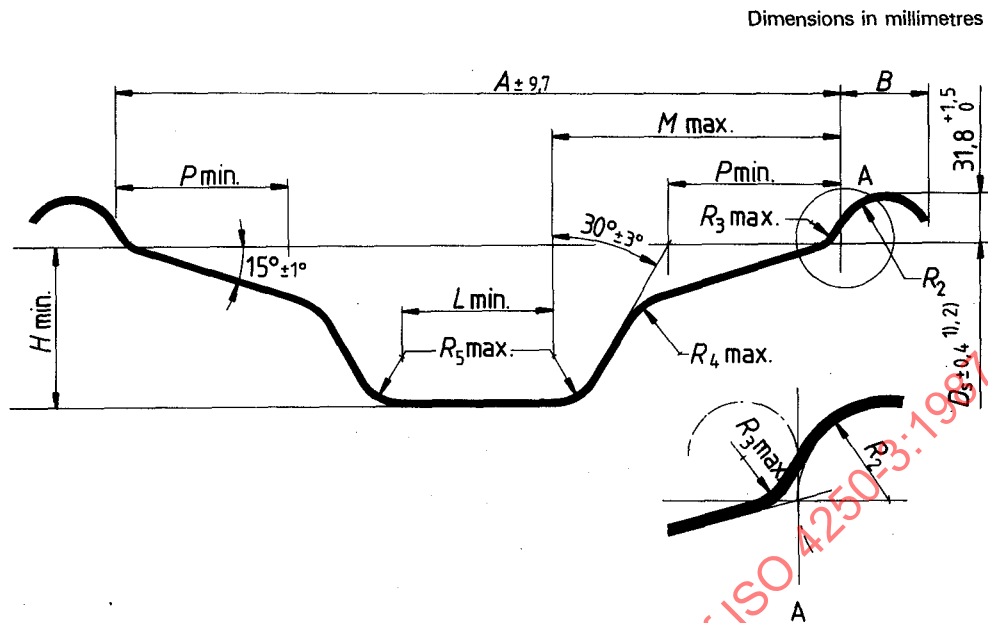


Figure 4 — Contours of 15° drop centre rims

- 1) The tolerance given for the specified rim diameter, D_s , is for tyre design purposes only. The actual rim measurement by circumference is established by using a mandrel and a tape.
- 2) Rim diameter codes applicable to this figure and table are 56.5 and 59.5.

Table 4 — Contours of 15° drop centre rims

Dimensions in millimetres

Rim width code	A	B		H min.	L min.	M max.	P min.	R ₂	R ₃ max.	R ₄ max.	R ₅ max.
		min.	max.								
20.0	508,0	57,2	69,9	109,5	106,7	201,2	120,6	31,8	19,1	44,5	31,8
22.0	558,8	57,2	69,9	109,5	157,5	201,2	120,6	31,8	19,1	44,5	31,8
23.5	596,9	66,5	76,2	131,8	111,8	247,7	152,4	41,1	25,4	47,8	38,1
27.0	685,8	66,5	76,2	131,8	200,7	247,7	152,4	41,1	25,4	47,8	38,1

Dimensions in millimetres

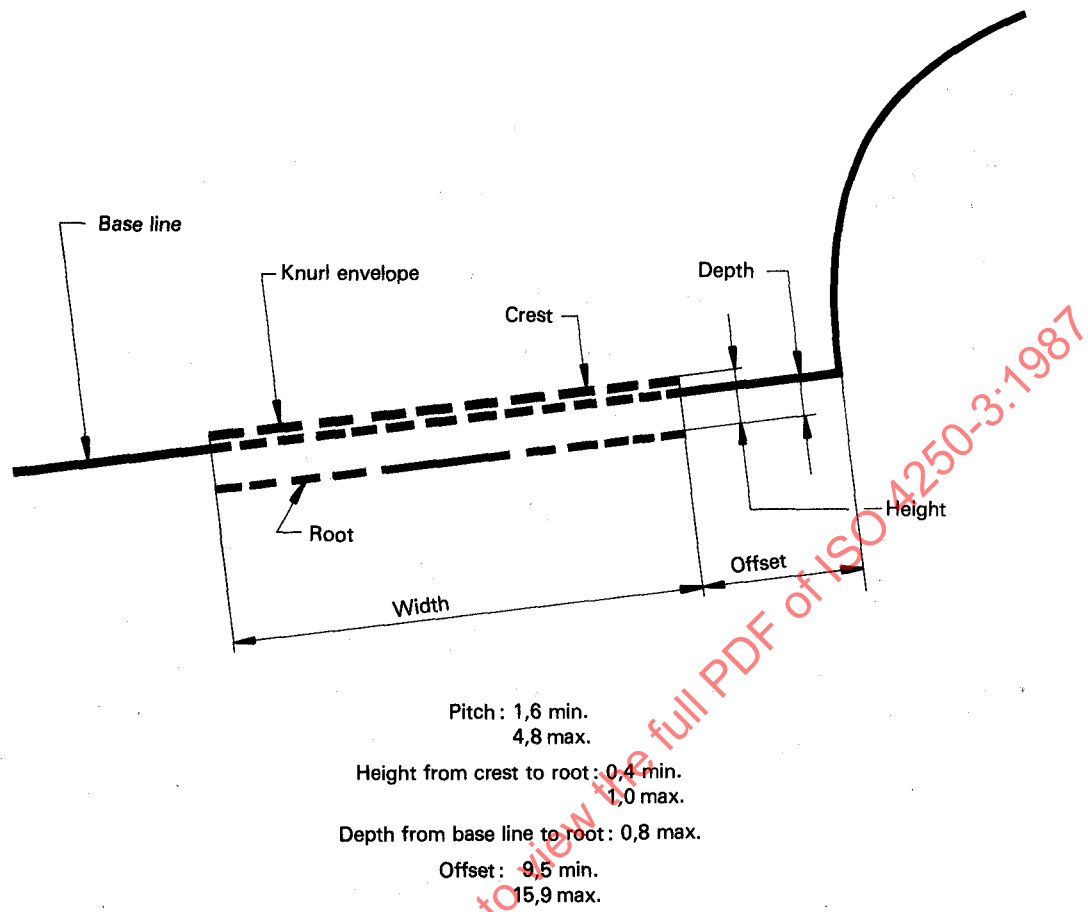


Figure 5 — Transverse knurling details

Table 5 — Knurling widths for rim diameter codes 24 to 49

Dimensions in millimetres

Rim width codes	Knurling width	
	Fixed flange side	Removable flange side
11.25 to 15.00	25,4 min.	38,1 min. 50,8 max.
Above 17.00	38,1 min. 66,7 max.	38,1 min. 66,7 max.

Table 6 — Knurling width for rim diameter codes 51 and larger

Dimensions in millimetres

Rim width codes	Knurling width	
	Fixed flange side	Removable flange side
22.00 and above	53,9 min. 66,7 max.	53,9 min. 66,7 max.

Table 7 — Off-road specified rim diameters

Rim diameter codes	Specified diameter, D_s mm
20	1)
21	533,4
24	1)
25	635,0
29	736,6
33	838,2
35	889,0
39	990,6
43	1 092,2
45	1 143,0
49	1 244,6
51	1 295,4
57	1 447,8
56.5	1 435,1
59.5	1 511,3

1) Under study.