
**Tyres (ply rating marked series) and rims
for agricultural tractors and machines —**

**Part 3:
Rims**

*Pneumatiques (série à marquage «équivalent nappes») et jantes pour
tracteurs et machines agricoles*

Partie 3: Jantes

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ISO 4251-3:2006

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Published in Switzerland

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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.

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.

ISO 4251-3 was prepared by Technical Committee ISO/TC 31, *Tyre, rims and valves*, Subcommittee SC 5, *Agricultural tyres and rims*.

This fourth edition cancels and replaces the third edition (ISO 4251-3:1994), which has been technically revised.

ISO 4251 consists of the following parts, under the general title *Tyres (ply rating marked series) and rims for agricultural tractors and machines*:

- *Part 1: Tyre designation and dimensions, and approved rim contours*
- *Part 2: Tyre load ratings*
- *Part 3: Rims*
- *Part 4: Tyre classification and nomenclature*
- *Part 5: Logging and forestry service tyres*

Tyres (ply rating marked series) and rims for agricultural tractors and machines —

Part 3: Rims

1 Scope

This part of ISO 4251 specifies rim dimensions for the ply rating marked series of tyres for agricultural tractors and machines.

NOTE Tyre designation and dimensions, load ratings and tyre classification and nomenclature are given in ISO 4251-1, ISO 4251-2, ISO 7867-2, ISO 4251-4, ISO 7867-1 and ISO 8664.

All dimensions in this part of ISO 4251 are given in millimetres and are applicable to the side of the rim which is in contact with the tyre.

NOTE Terms used are in accordance with ISO 3911:2004.

2 Normative references

The following referenced documents are indispensable for the application 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 4000-2:2001, *Passenger car tyres and rims — Part 2: Rims*

ISO 4209-2:2001, *Truck and bus tyres and rims (metric series) — Part 2: Rims*

3 Rim diameters and circumferences

Nominal rim diameter codes D_R are shown in Table 1 related to the specified rim diameter given in Figure 1.

For rim diameter measurements, see Annex A.

A tolerance of $\pm 1,2$ mm on the rim circumference is permitted.

Table 1 — Rim diameters

Dimensions in millimetres

Nominal rim diameter code D_R	Specified rim diameter ^a D
4	100,8
6	151,6
8	202,4
9 ^b	227,8
10	253,2
12	304,0
13 ^b	329,4
14	354,8
15 ^b	380,2
16	405,6
17 ^b	436,6
18	462,0
19 ^b	487,4
20	512,8
24	614,4
26	665,2
28	716,0
30	766,8
32	817,6
34	868,4
36	919,2
38	970,0
40	1 020,8
42	1 071,6
44	1 122,4
46	1 173,2
48	1 224,0
50	1 274,8
52	1 325,6
54	1 376,4

^a The specified rim diameters, D , in millimetres, are derived from the nominal rim diameter codes, D_R , as follows:
 — $D_R > 16$, $D = 25,4 (D_R + 0,187 5)$;
 — $D_R \leq 16$, $D = 25,4 (D_R - 0,031 25)$.
 The values are rounded to 0,1 mm.
^b Values not recommended.

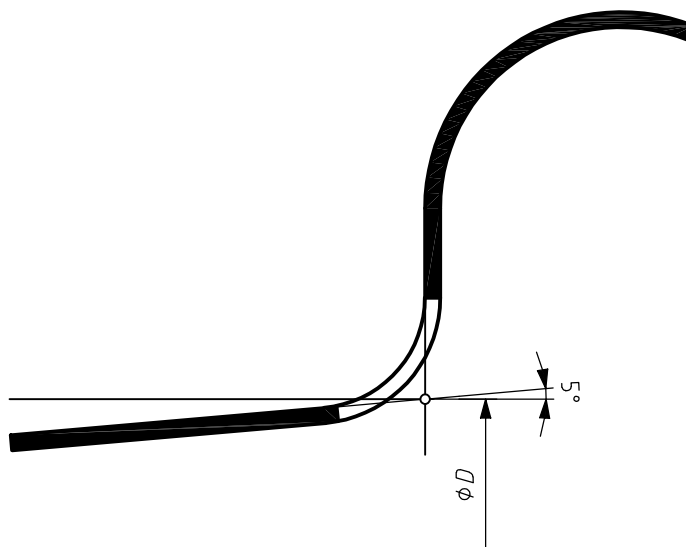


Figure 1 — Specified rim diameter

4 Rim contours and valve holes

4.1 Drop-centre W and DW rims

Dimensions and tolerances of drop-centre W and DW rims (includes all suffixes, for example DW-A, for W-C refer to Annex A) shall be as given in Table 2 and shown in Figure 2.

The valve hole shall have a diameter of 15,7 mm $+0,4$ ₀ mm and may be on either side of the rim.

The nominal valve seat angle is $30^\circ \pm 5^\circ$. To provide for valve-to-vehicle clearance, optional valve seat angles of 45° maximum are permissible. For any angle selected for a given rim, tolerance is $\pm 5^\circ$.

Table 2 — Dimensions of drop-centre W and DW rims

Dimensions in millimetres

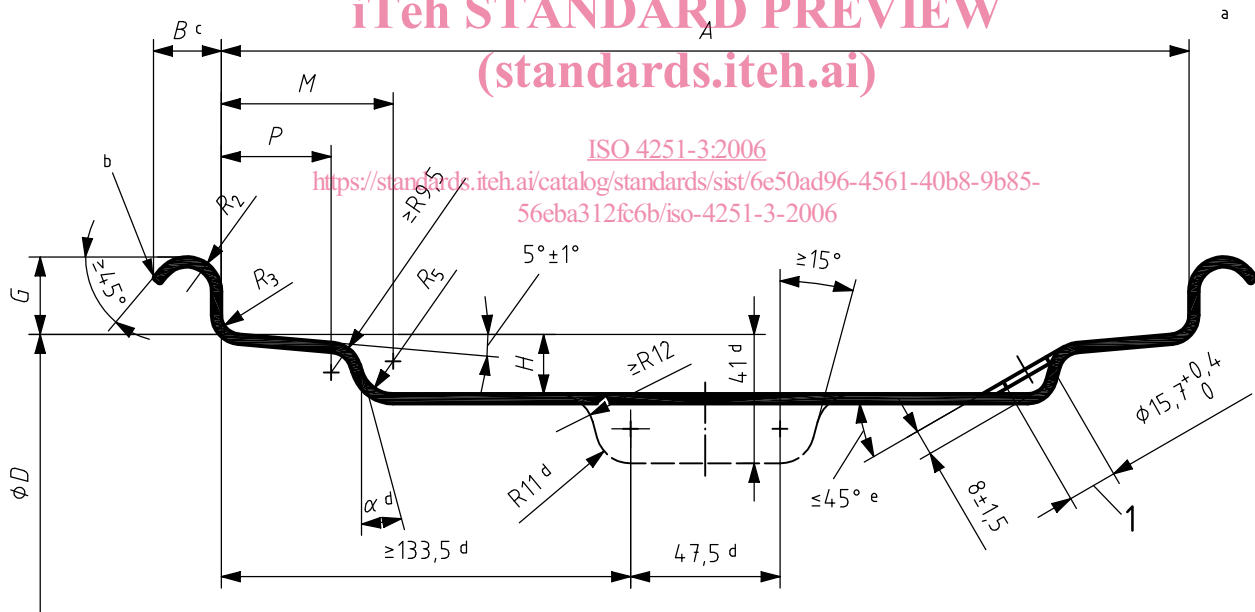
Rim size	A	tol.	B	G	H	M	P	R ₂	R ₃	R ₅	α			
			min.	± 1,0	min.	max.	min.		max.	max.	min.			
W 6	152,5	± 2,5	10,0	22,5	20,5	44,5	23,5	9,5	6,5	11,0	6°			
W 7	178,0			19,3		60,5								
W 7 L				22,5		44,5								
W 8	203,0		11,5	25,5		57,5	33,0	11,0				6,5		
W 8 H						22,0	51,0						27,0	
W 8 L						57,5								
W 9	228,5					25,5	66,0	41,0				15,0	8,0	
W 10	254,0		11,5	16,0		22,0	57,5	27,0				11,0	6,5	
W 10 A							66,0	41,0						
W 10 H							33,0							
W 10 L			22,0	57,5	27,0									
W 11	279,5		11,5	ISO 4251-3:2006	66,0	41,0			11,0					
W 11 H				56ba312fc6b/iso-4251-3-2006	66,0	41,0								
W 12	305,0	16,0	11,5	25,5	57,5	27,0	11,0	6,5						
W 12 A						66,0			41,0	15,0	8,0			
W 13	330,0	11,5	16,0	25,5	57,5	27,0	11,0	6,5						
W 13 A						66,0			41,0	15,0	8,0			
W 14 L	355,5	± 5,0	11,5	25,5	57,5	27,0	11,0	6,5						
W 15 A	381,0		16,0		66,0	41,0			15,0	8,0				
W 15 L					11,5	57,5			33,0	11,0	6,5			
W 16 A	406,5		16,0		66,0	27,0			41,0	15,0	8,0			
W 16 L			11,5									33,0	11,0	
W 17 L	432,0		16,0									41,0	15,0	33,0
W 18 A	457,0													
W 18 L														
DW 10	254,0		± 2,5		11,5	29,0			27,0	63,5	36,5	11,0	8,0	14,5
DW 11	279,5													
DW 12	305,0													
DW 13	330,0													
DW 14 L	355,5	± 5,0	11,5	25,5	20,0	95,5	50,5	11,0	8,0	14,5				
DW 15 L	381,0													
DW 16 L	406,5													
DW 17 L	432,0													
DW 18 L	457,0													

Table 2 (continued)

Dimensions in millimetres

Rim size	A tol.	B min.	G ± 1,0	H min.	M max.	P min.	R ₂	R ₃ max.	R ₅ max.	α min.
DW 10 A	254,0	± 2,5	16,0	20,5	66,0	41,0	15,0	8,0	14,5	15°
DW 11 A	279,5				57,0					
DW 12 A	305,0				66,0					
DW 13 A	330,0	± 5,0		27,0	63,5	36,5				
DW 14 A	355,5				66,0					
DW 15 A	381,0				63,5					
DW 16 A	406,5	± 6,5	29,0	27,0	66,0	41,0				
DW 18 A	457,0				95,5	50,5				
DW 20 A	508,0									
DW 21 A	533,5									
DW 23 A	584,0									
DW 25 A	635,0									
DW 27 A	686,0									
DW 28 A	711,0									
DW 30 A	762,0									
DW 36 A	914,5									
DW 44 A	1117,5									

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Key

- 1 valve hole
- a The tyre-mounting side is that side of the rim for which the dimension *M* is shown.
- b Break corner equivalent to R 0,5 min.
- c Flange width includes edge radius. The portion of flange beyond the minimum width shall be lower than the highest point of the flange.
- d These dimensions comprise the minimum well envelope for tyre-mounting purposes.
- e For any angle selected for a given rim, the tolerance is ± 5°.

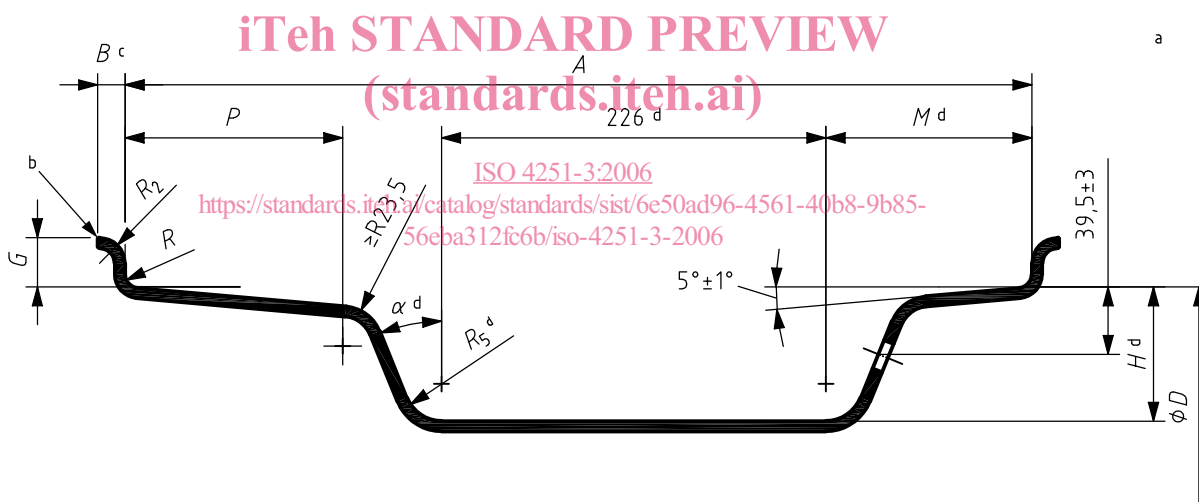
Figure 2 — Contour of drop-centre W and DW rims

4.2 Drop-centre DH rims

Dimensions and tolerances of drop-centre DH rims (including all suffixes, for example DH-H) shall be as given in Table 3 and shown in Figure 3.

Table 3 — Dimensions of drop-centre DH rims

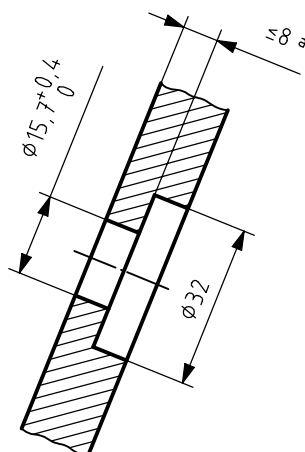
Rim size	Dimensions in millimetres										
	A	tol.	B min.	G ± 1	H min.	M max.	P min.	R ₂	R ₃ max.	R ₅ max.	α min.
DH 21	533,5	± 6,5	16	29	69	121	54	15	8	22	22°
DH 21 H							60				
DH 27	686,0						54				
DH 27 H							60				
DH 31	787,5						54				
DH 31 H							60				
DH 36	914,5						54				
DH 36 H							60				
DH 44	1 117,5						54				
DH 44 H							60				



- a The tyre-mounting side is that side of the rim for which the dimension *M* is shown.
- b Break corner equivalent to R 0,5 min.
- c Flange width includes edge radius. The portion of flange beyond the minimum width shall be lower than the highest point of the flange.
- d These dimensions comprise the minimum well envelope for tyre-mounting purposes.

Figure 3 — Contour of drop-centre DH rims

The location of valve holes in drop-centre DH rims is shown in Figure 4.



^a Maintain 8 max. dimension by counterboring on the weather side of the rim only.

Figure 4 — Location of the valve holes in drop-centre DH rims

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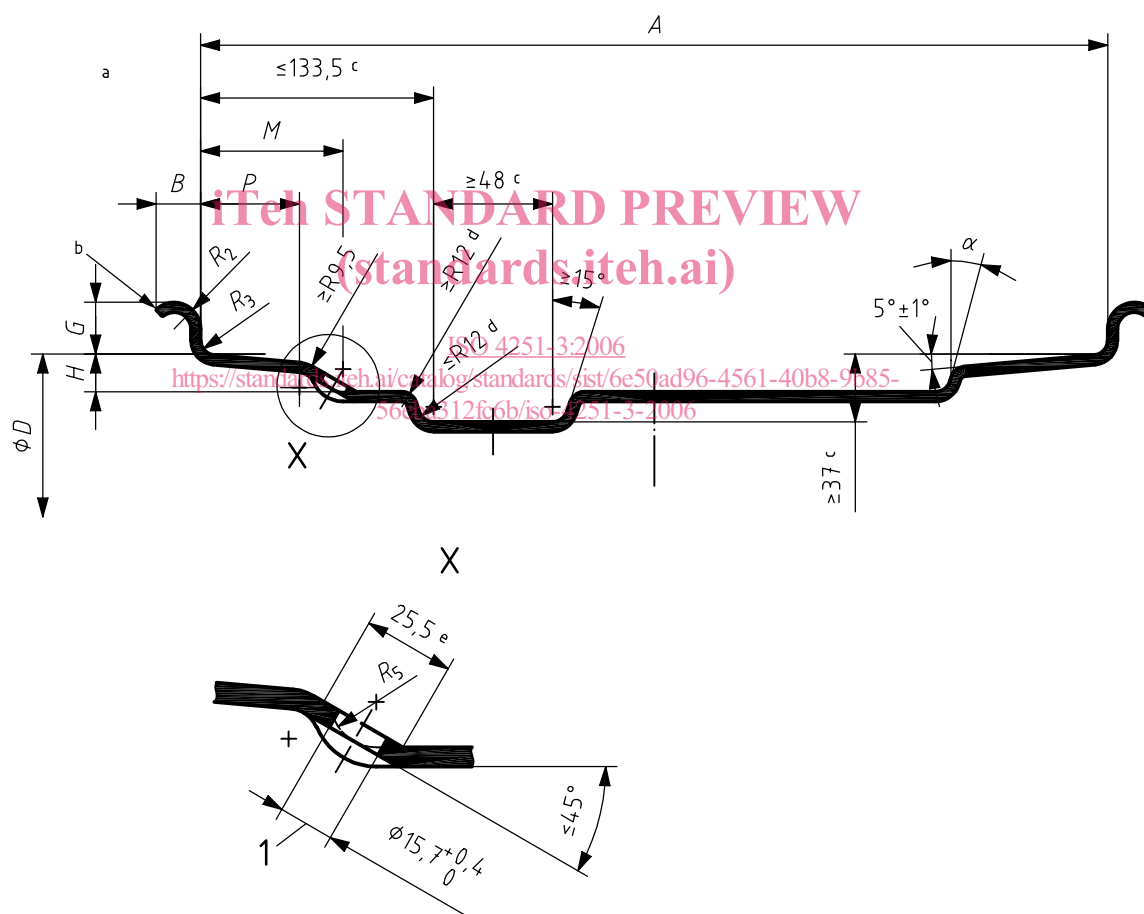
4.3 Drop-centre MW-A rims

Dimensions and tolerances of drop-centre MW-A rims shall be as given in Table 4 and shown in Figure 5.

The valve hole shall have a diameter of $15,7 \text{ mm} + 0,4$ mm and may be on either side of the rim.

Table 4 — Dimensions of drop-centre MW-A rims

Rim size	Dimensions in millimetres										
	<i>A</i>	tol.	<i>B</i> min.	<i>G</i> ± 1	<i>H</i> min.	<i>M</i> max.	<i>P</i> min.	<i>R</i> ₂	<i>R</i> ₃ max.	<i>R</i> ₅ max.	<i>α</i> min.
MW 20 A	508,0	± 6,5	16	29	19	95,5	50,5	15	8	14,5	15°
MW 23 A	584,0										
MW 25 A	635,0										
MW 28 A	711,0										



Key

1 valve hole

- a The tyre-mounting side is that side of the rim for which the dimension *M* is shown.
- b Flange width includes edge radius. The portion of flange beyond the minimum width shall be lower than the highest point of the flange.
- c These dimensions comprise the minimum well envelope for tyre-mounting purposes.
- d For any angle selected for a given rim, the tolerance is $\pm 5^\circ$.
- e Flat.

Figure 5 — Contour of drop-centre MW-A rims