

JIS

JAPANESE INDUSTRIAL STANDARD

Contours of Rims for Automobiles

JIS D 4218—1989

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In the event of any doubt arising,
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JAPANESE INDUSTRIAL STANDARD

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Contours of Rims for Automobiles

D 4218-1989

1. Scope

This Japanese Industrial Standard specifies the contours of rims for automobiles (hereafter referred to as the "rims") on which tyres are mounted.

However, the rims for two-wheeled vehicles, industrial vehicles, construction vehicles and agricultural machines are excluded.

- Remarks
1. Contours of rims of flange symbols of B and J newly established in ISO 4000-2 and ISO 4209-2 are specified in Appendix 1.
 2. Contours of rims for automobiles of small production amounts and for repairing are specified in Appendix 2.

2. Types

The types of contours of rims shall be as given in Table.

Applicable Standards:

JIS D 4102-Wheels/Rims-Classification, Designation and Marking

JIS D 4202-Dimensions of Tyres for Automobiles

JIS D 4230- Tyres for Automobiles

Corresponding International Standards:

ISO 4000-2-Passenger car tyres and rims – Part 2: Rims

ISO 4209-2-Truck and bus tyres and rims (metric series) – Part 2: Rims

Table Types of Contours of Rims

Type	Sym- bol	Figure	Symbols express- ing the shape of flange and the like	Style of hump (¹)	Applicable types of main tyres(²) (Informative reference)
5° tapered (drop- centre) rim	5°DC	Fig. 1	D, E	—	Passenger car tyres, ultralight truck tyres, light truck tyres
		Fig. 2.1, Fig. 2.2	B, J, JJ, K	—	
		Fig. 3.1, Fig. 3.2	B, J, JJ, K	RH	
		Fig. 4	J	SL	
		Fig. 5.1, Fig. 5.2	B, J, JJ, K	FH	
		Fig. 6	T type(³)	FH	T type emergency tyres(⁴) for passenger car
Semi drop- centre rim	SDC	Fig. 7.1, Fig. 7.2	E, F, GS	—	Light truck tyres
Interim rim (advanced)	IRA	Fig. 8.1, Fig. 8.2	S, T, V, WI	—	Truck and bus tyres
	IR	Fig. 9.1, Fig. 9.2	T, V	—	
15° tapered (drop- centre) rim	15°DC	Fig. 10.1, Fig. 10.2	—	—	Light truck tyres, truck and bus tyres

Notes (¹) This is in accordance with Fig. 2 Nomenclature of Contours of Bead Seat of JIS D 4102.

(²) These are in accordance with JIS D 4202.

(³) These indicate the rim exclusively for T type emergency tyre for passenger car.

(⁴) Refer to JIS D 4230.

3. Dimensions

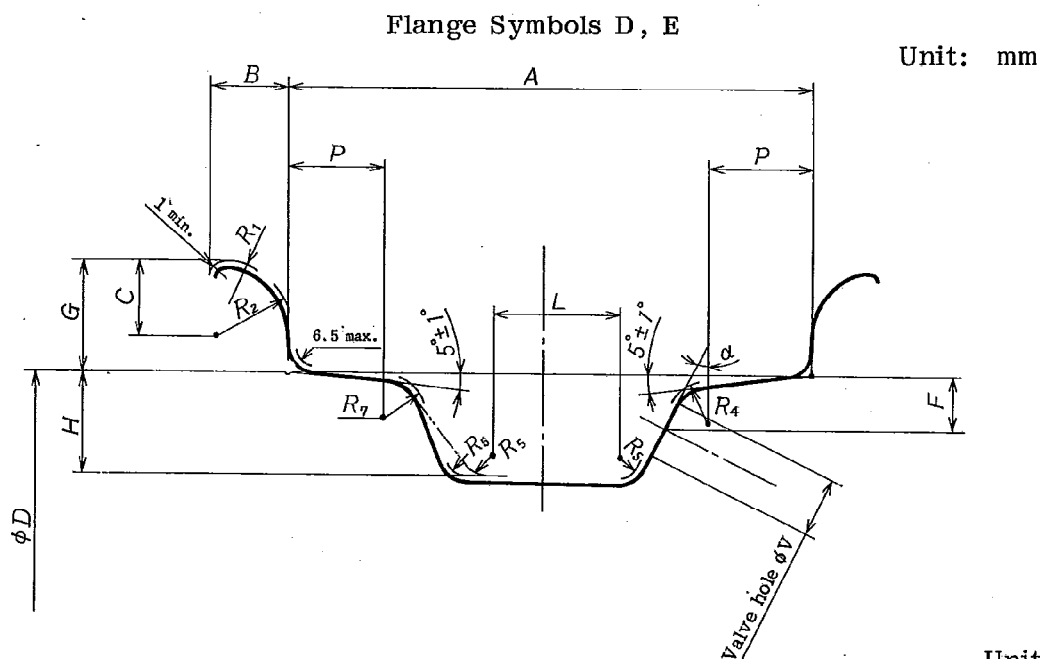
Contours and their dimensions relative to designation of the rim shall be as given in Figs. 1 to 10.

Further, dimensions without permissible deviations indicate reference dimensions.

Dimensions and shape of well portion specify the minimum space required for mounting and dismounting of tyres. If the minimum space (the space specified by H , L , R_5 and α in Figure) can be secured, the well bottom part may be inclined.

Remark: Designations of rims shall be in accordance with JIS D 4102.

Fig. 1 Contour of 5° Tapered (Drop-Centre) Rim (Symbol 5° DC)



Designa- tion of rim	A		B Min.	P Min.	C	L Min.	F		V		G		H Min.	R ₁	R ₂	R ₄	R ₅	R ₇	α	
	Di- men- sion	Permis- sible devia- tions					Di- men- sion	Permis- sible devia- tions	Di- men- sion	Permis- sible devia- tions	Di- men- sion	Permis- sible devia- tions							Angle	Permis- sible devia- tions
12×3,00 D	76,0	±1.5	12	16	12,5	18	11,0	±1.0	11,5	±0.2	17,5	+1.0 -0.5	19	8	13	6.5	5	6.5	—	—
16×4,00 E	102.0		13	18	13.5	25	13,0		16,0		20.0		25.5	8.5	14	9.5	6.5	9.5	15°	
16×4,50 E	114,0																			20°
16×5,00 E	127.0																			

Unit: mm

Designation of rim	D	Outer periphery of D part	
		Dimension	Permissible deviations
12	304.0	955.0	±1.2
16	405.6	1 274.2	

Remarks 1. The valve hole position in Figure may be provided either on the right side or left.

Further, in the case where the use is limited to tubeless valve, it may be bottom part in the range where there is no interference to function.

2. The chain double-dashed line in Figure indicates the permissible contour.

Fig. 2.1 (Continued)

Unit: mm

Designation of rim	A		B Min.	P Min.	C	L Min.	F		V		G		H Min.	R ₁	R ₂	R ₄	R ₅	R ₇	α				
	Di- men- sion	Permis- sible devia- tions					Di- men- sion	Permis- sible devia- tions	Di- men- sion	Permis- sible devia- tions	Di- men- sion	Permis- sible devia- tions							Angle	Permis- sible devia- tions			
13×5 1/2 J	140.0				9.5						17.5	+1.0 -0.5		6.5	9.5	8 Max.		8					
14×5 1/2 J																							
15×5 1/2 J																							
13×5 1/2 JJ																							
14×5 1/2 JJ																							
15×5 1/2 JJ																							
16×5 1/2 JJ	152.0				9	25.5	10.5	11.5		17	18.0	±0.7	—	9		9.5 Max.	6.5	9.5	20°	±5°			
13×6 JJ																							
14×6 JJ																							
15×6 JJ																							
16×6 JJ	165.0	±1.5	13	20					±0.2														
13×6 1/2 JJ																							
14×6 1/2 JJ																							
15×6 1/2 JJ																							
16×6 1/2 JJ																							
13×7 JJ	178.0																						
14×7 JJ																							
15×7 JJ																							
16×7 JJ																							
15×4 1/2 K	114.0																						
16×4 1/2 K																							
15×5 K	127.0	140.0			10.5		12.5		16.0 (°)		19.5	+1.0 -0.5	20	6.5	11								
15×5 1/2 K																							
16×5 1/2 K																							

Note (5) In the case where the use is limited to tubeless valve, this may be 11.5.

Unit: mm

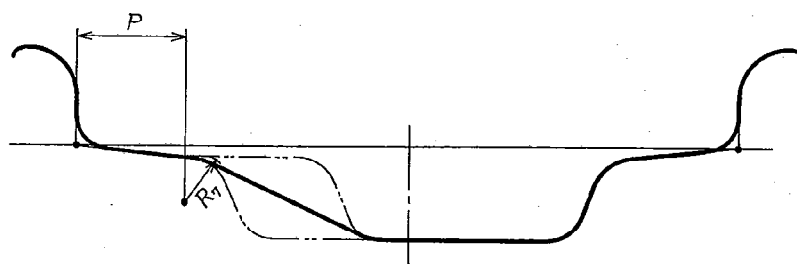
Designation of rim	D	Outer periphery of D part	
		Dimension	Permissible deviations
10	253.2	795.5	±1.2
12	304.0	955.0	
13	329.4	1 034.8	
14	354.8	1 114.6	
15	380.2	1 194.4	
16	405.6	1 274.2	

Remarks 1. The valve hole position of Figure may be provided either on the right side or left.

Further, in the case where the use is limited to tubeless valve, it may be the bottom part or the position avoiding the left side bead seat width (P) range, in the range where there is no interference to function.

2. The chain double-dashed line in Figure indicates the permissible contour.
3. The contour shown in Fig. 2.2 may be used.
4. P (bead seat width) indicates the range requiring $5^\circ \pm 1^\circ$ (bead seat angle).

Fig. 2.2 Permissible Contour



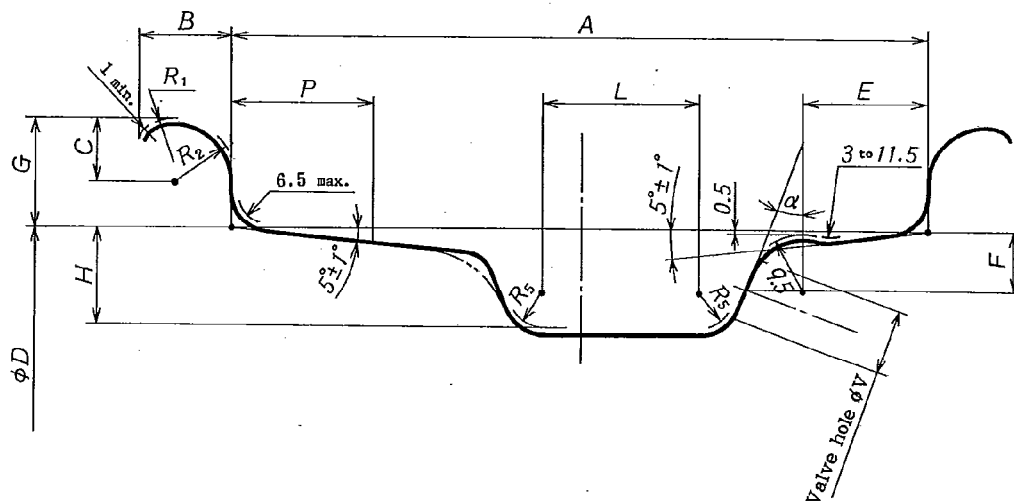
- Remarks 1. The chain double-dashed line in Figure indicates the permissible contour.
2. The position of part not indicated shall be in accordance with Fig. 2.1.

Fig. 3.1 Contour of 5° Tapered (Drop-Centre) Rim (Symbol 5°DC)

Flange Symbols B, J, JJ, K

Hump Style RH

Unit: mm



Unit: mm

Designation of rim	A		B	P	E	C	L	F		V		G		H	R ₁	R ₂	R ₅	α	
	Dimension	Permissible deviations	Min.	Min.			Min.	Dimension	Permissible deviations	Dimension	Permissible deviations	Dimension	Permissible deviations	Min.				Angle	Permissible deviations
10×3.00B	76.0			13	13														
12×3.00 B																			
10×3.50 B	89.0						18										5		
12×3.50 B					16														
13×3.50 B	102.0		10	16		7.5	19	10.0				14.0		16.5	—	7.5		15°	
12×4.00 B					16														
13×4.00 B	114.0				22														
12×4.50 B																			
13×4.50 B	127.0			20	22		22												
10×5.00 B																			
13×5.00 B	89.0	±1.5		16			22.5		±1.0	11.5	±0.2		+1.0 -0.5					±5°	
12×3 1/2 J																			
12×4 J	102.0				16												6.5		
13×4 J																			
14×4 J	114.0																		
12×4 1/2 J					16														
13×4 1/2 J	127.0		13	20	20	9.5	25.5	10.5				17.5		17	6.5	9.5		20°	
14×4 1/2 J					22														
15×4 1/2 J	127.0																		
16×4 1/2 J					22														
12×5 J	127.0																		
13×5 J					20														
14×5 J	127.0				22														
15×5 J																			
16×5 J																			

Fig. 3.1 (Continued)

Unit: mm

Designation of rim	A		B Min.	P Min.	E	C	L Min.	F		V		G		H		R ₁	R ₂	R ₃	α	
	Dimension	Permissible deviations						Dimension	Permissible deviations	Dimension	Permissible deviations	Dimension	Permissible deviations	Min.	Angle				Permissible deviations	
13×5 1/2 J	140.0		13	20	20	9.5							17.5	+1.0 -0.5		6.5	9.5			
14×5 1/2 J					22															
15×5 1/2 J																				
13×5 1/2 JJ																				
14×5 1/2 JJ																				
15×5 1/2 JJ																				
16×5 1/2 JJ	152.0		13	20								18.0	±0.7	17		9	6.5	20°	±5°	
13×6 JJ																				
14×6 JJ																				
15×6 JJ																				
16×6 JJ																				
13×6 1/2 JJ	165.0	±1.5	13	20	22	9	25.5	±1.0	±0.2											
14×6 1/2 JJ																				
15×6 1/2 JJ																				
16×6 1/2 JJ																				
13×7 JJ	178.0		13	20																
14×7 JJ																				
15×7 JJ																				
16×7 JJ																				
15×8 JJ	203.0		13	20																
16×8 JJ																				
15×4 1/2 K	114.0		13	20									19.5	+1.0 -0.5	20	6.5	11			
16×4 1/2 K																				
15×5 K	127.0				20	10.5	12.5		16.0 (5)											
15×5 1/2 K	140.0		13	20																
16×5 1/2 K																				

Note (⁵) In the case where the use is limited to tubeless valve, this may be 11.5.

Unit: mm

Designation of rim	D	Outer periphery of D part	
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Remarks 1. The valve hole position of Figure may be provided either on the right side or left.

Further, in the case where the use is limited to tubeless valve, it may be the bottom part or the position avoiding the left side bead seat width (*P* and *E* of Fig. 3.2) range, in the range where there is no interference to function.