INTERNATIONAL STANDARD

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Second edition
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Industrial tyres and rims —

Part 3: Rims

Pneumatiques et jantes industriels pour matériel de manutention —

Partie 3: Jantes

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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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 3739-3 was prepared by Technical Committee ISO/TC 31, *Tyres, rims and valves*, Subcommittee SC 7, *Industrial tyres and rims*.

This second edition cancels and replaces the first edition (ISO 3739-3:1995), which has been technically revised.

ISO 3739 consists of the following parts, under the general title *Industrial tyres and rims*:

— *Part 1: Pneumatic tyres (metric series) on 5° tapered or flat base rims — Designation, dimensions and marking*

— *Part 2: Pneumatic tyres (metric series) on 5° tapered or flat base rims — Load ratings*

— *Part 3: Rims*

Industrial tyres and rims —

Part 3:
Rims

1 Scope

This part of ISO 3739 specifies the main requirements, including size designation and marking, of 5° tapered and flat base rims, with diameters not exceeding rim diameter code 15 for pneumatic tyres and for solid tyres for pneumatic tyre rims, primarily intended for industrial vehicles for use on prepared surfaces.

ISO 3739-1 gives the designation, dimensions and marking, and ISO 3739-2 gives the load ratings, of pneumatic tyres (metric series). ISO 10499-1 covers the designation, dimensions and marking of rubber solid tyres (metric series) for pneumatic tyre rims.

Rim dimensions are specified for size and contour only. The tyre and wheel/rim manufacturers are consulted for confirmation of the suitability of the tyre/rim combinations, particularly with regard to rim profile and wheel strength.

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 3911:2004, *Wheels and rims for pneumatic tyres — Vocabulary, designation and marking*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 3911 apply.

4 Designation and marking

Rim designation and marking shall be in accordance with ISO 3911:2004, Annexes A and B.

5 Rim profiles

As far as possible, rims shown in Tables 1 and 2 should be used for the metric series of tyres; only if absolutely necessary should new profiles be considered.

All rim profiles shall be independent from the rim diameter, i.e. no change of profile shall be related to the diameter.

The flange widths include edge radius. The portion of the flange beyond the minimum width shall be equal to, or less than, the highest point of the flange.

The rims shall have a 5° tapered bead seat.

The specified rim diameters, D, shall be as given in Table 3.

Table 1 — Index of one-piece and multi-piece rims

Rim width code	Existing rims	Rim profile details are indicated in	
		Figures	Tables
2.50	4 - 2.50 C 4 × 2.50 C 8 - 2.50 C 8 × 2.50 C	A.1, A.2	A.1, A.2
3.00	8 - 3.00 D	A.3	A.3
3.25	4 - 3.25 I 6 - 3.25 I 8 - 3.25 I	A.1	A.1
4.0	9 - 4.00 E 9 × 4.00 E	A.1, A.2, A.3	A.1, A.2, A.3
5.0	10 - 5.00 F 10 × 5.00 F	A.1	A.1
	12 IL - 5.00 S	A.1, A.3	A.1, A.3
	15 TB - 5.0[a]	A.4	A.4
6.0	9 - 6.00 E	A.3	A.3
6.5	10 - 6.50 F	A.1, A.3	A.1, A.3
	15 - B 6.5 15 - 6.5[a]	A.4	A.4
8.0	12 - 8.00 G	A.3	A.3
	15 - 8.0 15 - B 8.0	A.4	A.4

[a] Rims with identical designation but different dimensions exist.

Table 2 — Index of drop centre rims

Rim width code	Reference standard	Nominal rim diameter code	
		8	9
2.50 C	ISO 4251-3	X	
4.00 E	ISO 4251-3		X

Table 3 — Specified rim diameters

Nominal rim diameter code	Specified rim diameter $D \pm 0{,}4$ mm [a]
4	100,8
6	151,6
8	202,4
9	227,8
10	253,2
12	304,0
12 IL	308,8
(B) 15	385,8
15 TB	387,4

[a] The tolerance is for tyre design purposes only. The rim measurement is made by a circumference-measuring tape related to a mandrel.

Annex A
(normative)

Size range of existing rims

This annex gives detailed characteristics of existing rim profiles for which an index is provided in Table 1.

Tables A.1, A.2, A.3 and A.4 give existing combinations of dimension and nominal rim diameter code corresponding to Figures A.1, A.2, A.3 and A.4, respectively. The specified rim diameter, D, may be found in Table 3.

Dimensions in millimetres

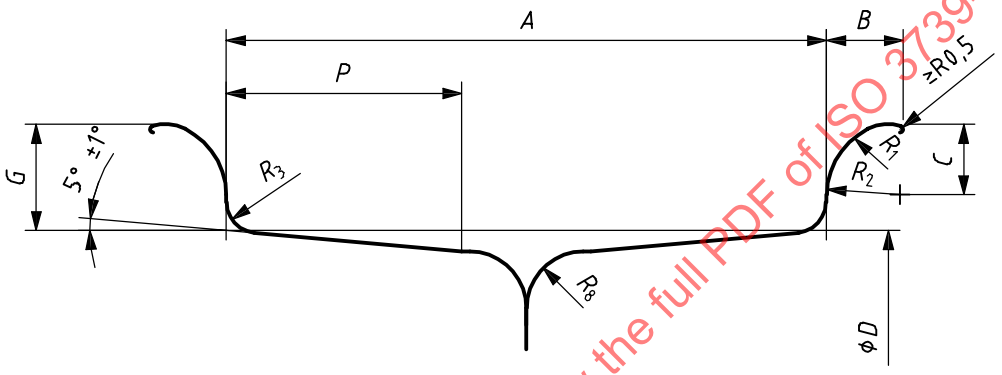


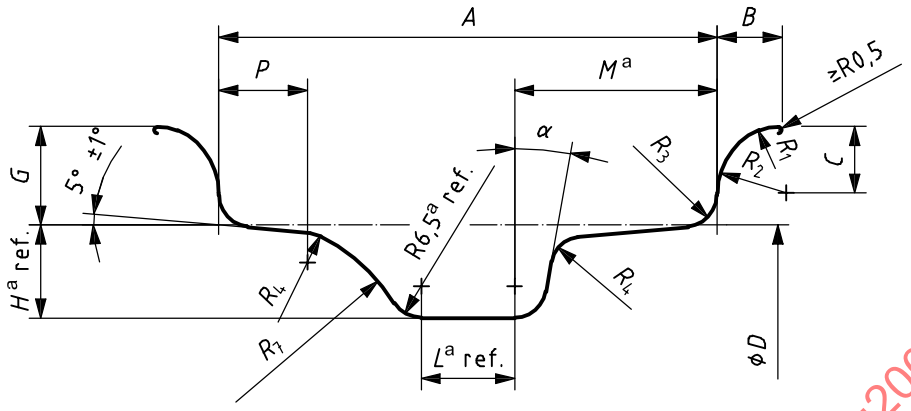
Figure A.1 — 5° tapered divided rims

Table A.1 — 5° tapered divided rims — Rim contours

Dimensions in millimetres

Rim width code	Nominal rim diameter code	A ± 2,0	G	B	C	P	R_1	R_2	R_3	R_8
2.50 C	4, 8	63,5	16,5 ± 1,0	⩾ 11	11,5	⩾ 12	7,5	12	⩽ 3,5	⩽ 5
3.25 I	4, 6, 8	82,5	16,0 ± 1,0	⩾ 10	—	—	—	9	⩽ 4,5	⩽ 8
4.00 E	9	101,5	20,0 ± 1,0	⩾ 12,5	13,5	⩾ 25	8,5	14	⩽ 6,5	⩽ 10
5.00 S	12IL	127,0	31,5 ± 1,5	⩾ 19	—	⩾ 43	—	18,5	⩽ 8	⩽ 16
5.00 F	10	127,0	22,5 ± 1,0	⩾ 13	14,5	⩾ 23,5	9,5	15,5	⩽ 6,5	⩽ 12
6.50 F	10	165,0	22,5 ± 1,0	⩾ 13	14,5	—	9,5	15,5	⩽ 6,5	⩽ 12

Dimensions in millimetres



[a] These dimensions comprise the minimum well envelope for tyre-mounting purposes.

Figure A.2 — 5° drop centre rims

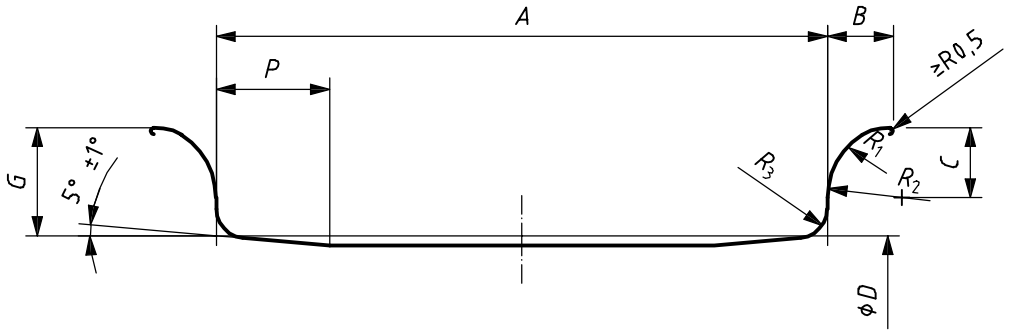
Table A.2 — 5° drop centre rims — Rim contours

Dimensions in millimetres

Rim width code	Nominal rim diameter code	A ± 2,0	G ± 1,0	B	C	P	R_1	R_2	R_3	R_4	R_7	H [a] ref.	L [a] ref.	M [a]	α [a]
2.50 C	4,8	63,5	16,5	⩾ 11	11,5	⩾ 12	7,5	12	⩽ 3,5	⩾ 6	28,5	13,5	12,5	⩽ 25,5	⩾ 13°
4.00 E	9	101,5	20,0	⩾ 12,5	13,5	⩾ 18	8,5	14	⩽ 6,5	⩾ 6	38	19	19	⩽ 35	⩾ 10°
5.00 F	10	127,0	22,5	⩾ 13	14,5	⩾ 23,5	9,5	15,5	⩽ 6,5	⩾ 6	—	26	25	⩽ 54	⩾ 15°

[a] These dimensions comprise the minimum well envelope for tyre-mounting purposes.

Dimensions in millimetres



NOTE Flange and bead seat are removable on one side of the rim.

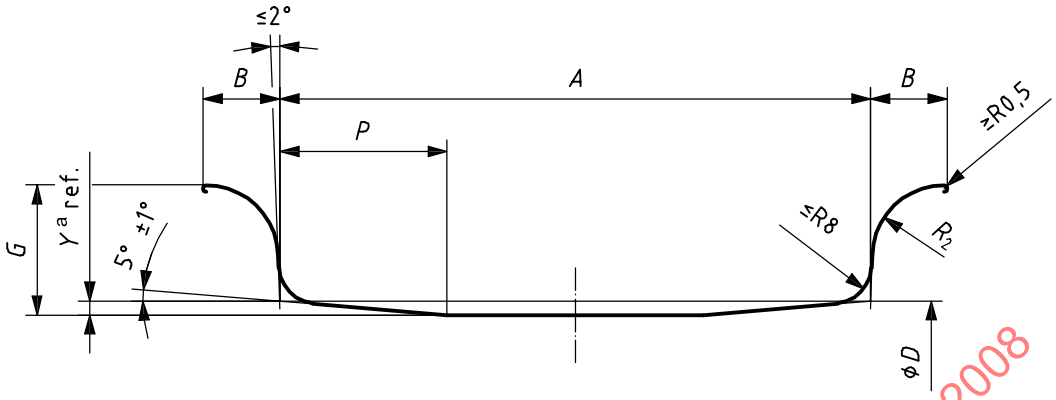
Figure A.3 — 5° tapered rims for codes 3.00 D, 4.00 E, 5.00 F, 5.00 S, 6.00 E, 6.50 F and 8.00 G

Table A.3 — 5° tapered rims for codes 3.00 D, 4.00 E, 5.00 F, 5.00 S, 6.00 E, 6.50 F and 8.00 G — Rim contours

Dimensions in millimetres

Rim width code	Nominal rim diameter code	*A*	*G*	*B*	*P*	*C*	R_1	R_2	R_3
3.00 D	8	76,0 ± 2,0	18,0 ± 1,0	⩾ 12	⩾ 14	12,5	8	13	⩽ 4,5
4.00 E	9	101,5 ± 2,0	20,0 ± 1,0	⩾ 12,5	⩾ 25	13,5	8,5	14	⩽ 6,5
5.00 F	10	127,0 ± 2,0	22,5 ± 1,0	⩾ 13	⩾ 23,5	14,5	9,5	15,5	⩽ 6,5
5.00 S	12IL	127,0 ± 2,5	31,5 ± 1,5	⩾ 19	⩾ 43	—	—	18,5	⩽ 8
6.00 E	9	152,5 ± 2,0	20,0 ± 1,0	⩾ 12,5	⩾ 28	13,5	8,5	14	⩽ 6,5
6.50 F	10	165,0 ± 2,0	22,5 ± 1,0	⩾ 13	⩾ 34	14,5	9,5	15,5	⩽ 6,5
8.00 G	12	203,0 ± 3,0	28,0 ± 1,0	⩾ 14,5	⩾ 40,5	—	—	14	⩽ 7,5

Dimensions in millimetres



NOTE Flange and bead seat are removable on one side of the rim.

Figure A.4 — 5° tapered rims for codes 5.0, 6.5, B 6.5, 8.0 and B 8.0

Table A.4 — 5° tapered rims for codes 5.0, 6.5, B 6.5, 8.0 and B 8.0 — Rim contours

Dimensions in millimetres

Rim width code	Nominal rim diameter code	A ± 3,5	G ± 1,5	B	R_2 ± 2,5	Y [a] ref.	P
5.0 [b]	15 TB [c,d]	127,0	28,0	⩾ 16,5	14,0	3	⩾ 36
6.5 [b]	15 TB [c]	165,0	35,5	⩾ 20	18,0	3	⩾ 36
B 6.5	15	165,0	38,0	⩾ 21,5	19,0	2,5	⩾ 27
8.0	15 TB [c]	203,0	43,0	⩾ 24	21,5	3	⩾ 36
B 8.0	15	203,0	43,0	⩾ 24	21,5	2,5	⩾ 27

a Y is the distance of specified rim diameter profile from nominal diameter profile.

b Rims with the same designation but different dimensions exist.

c Rims without TB designation exist.

d This combination exists, with a specified rim diameter, D, of (385,8 ± 0,4) mm, but is not for new rim designs.