
**Rolling bearings — Radial ball
bearings with flanged outer ring —
Flange dimensions**

*Roulements — Roulements à billes avec bague extérieure à collet —
Dimensions de collet*

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 4, *Rolling bearings*, Subcommittee SC 12, *Ball bearings*.

This fourth edition cancels and replaces the third edition (ISO 8443:2010), which has been technically revised.

The main changes are as follows:

- the Scope and Normative references have been modified corresponding to the withdrawal of ISO 1224-1 (i.e. tolerances of the flanges for instrument precision bearing are no longer referred to in this edition);
- [Figure 1](#) has been modified.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Rolling bearings — Radial ball bearings with flanged outer ring — Flange dimensions

1 Scope

This document specifies flange dimensions of single-row radial ball bearings with flanged outer ring and single-row angular contact ball bearings with flanged outer ring. All other boundary dimensions for complete bearings are given in ISO 15.

Tolerances for the flanges are given in ISO 492.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 5593, *Rolling bearings — Vocabulary*

ISO 15241, *Rolling bearings — Symbols for physical quantities*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5593 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

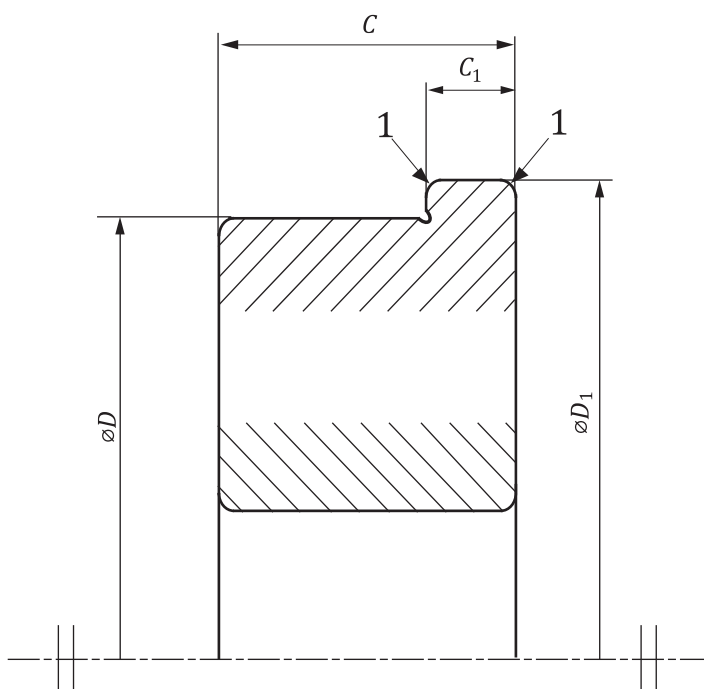
- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

4 Symbols

For the purposes of this document, the symbols given in ISO 15241 and the following shall apply.

The symbols shown in [Figure 1](#) and the values given in [Tables 1](#) to [4](#) denote nominal dimensions, unless specified otherwise.

- C outer ring width
- C_1 outer ring flange width
- D outside diameter of outer ring
- D_1 outside diameter of outer ring flange



Key
 1 broken corners

Figure 1 — Bearing with flanged outer ring

5 Flange dimensions

Flange dimensions for single-row radial ball bearings with flanged outer ring and single-row angular contact ball bearings with flanged outer ring grouped by diameter series and dimension series in accordance with ISO 15 are given in [Tables 1 to 4](#).

Table 1 — Diameter series 7

Dimensions in millimetres

D	D_1	C_1
		Dimension series
		17
4	4,8	0,35
5	6	0,4
6	7,2	0,6
7	8,2	0,6
8	9,2	0,6
10	11,2	0,6
11	12,2	0,6
12	13,2	0,6
14	15,5	0,8
15	16,5	0,8

Table 2 — Diameter series 8

Dimensions in millimetres

<i>D</i>	<i>D</i> ₁	<i>C</i> ₁		
		Dimension series		
		18	28	38
2,5	3,3	0,3	—	—
3	3,8	0,3	—	0,45
4	5	0,4	—	0,6
5	6,1	0,5	—	0,6
6	7,1	0,5	—	0,8
7	8,1	0,5	—	0,8
9	10,3	0,6	1	1
11	12,5	0,8	1	1
13	15	1	1,1	1,1
14	16	1	1,1	1,1
16	18	1	1,1	1,3
17	19	1	1,1	1,3
19	21	1	1,3	1,5

Table 3 — Diameter series 9

Dimensions in millimetres

<i>D</i>	<i>D</i> ₁	<i>C</i> ₁	
		Dimension series	
		19	39
4	5	0,5	0,6
5	6,5	0,6	0,8
6	7,5	0,6	0,8
7	8,5	0,7	0,9
8	9,5	0,7	0,9
11	12,5	1	1,2
13	15	1	1,2
15	17	1,2	1,5
17	19	1,2	1,5
19	22	1,5	1,8
20	23	1,5	1,8
22	25	1,5	2

Table 4 — Diameter series 0, 2 and 3

Dimensions in millimetres

D	D ₁	C ₁	D ₁	C ₁	D ₁	C ₁
	Diameter series					
	0		2		3	
	Dimension series					
	10		02		03	
6	7,5	0,6	—	—	—	—
7	8,5	0,7	—	—	—	—
8	9,5	0,7	—	—	—	—
9	10,5	0,7	—	—	—	—
10	—	—	11,5	1	—	—
12	13,5	1	—	—	—	—
13	—	—	15	1	15	1
14	16	1	—	—	—	—
16	—	—	18	1	18	1
17	19	1,2	—	—	—	—
19	22	1,5	22	1,5	22	1,5
22	25	1,5	25	1,5	25	1,5
24	27	1,5	26	2	—	—
26	28	2	28	2	29	2
28	30	2	—	—	30,25	2,25
30	—	—	32,25	2,25	32,5	2,5
32	34,25	2,25	34,5	2,5	—	—
35	37,5	2,5	37,75	2,75	37,75	2,75
37	—	—	—	—	40	3
40	—	—	43	3	—	—
42	45	3	—	—	45	3
44	47	3	—	—	—	—
47	50	3	50,5	3,5	50,5	3,5
50	—	—	53,5	3,5	—	—
52	55	3	55,75	3,75	55,75	3,75
55	58,25	3,25	—	—	—	—
56	—	—	—	—	60	4
58	61,25	3,25	62	4	—	—
62	65,5	3,5	66	4	66	4
65	—	—	69,25	4,25	—	—
68	71,75	3,75	—	—	72,25	4,25
72	—	—	76,25	4,25	76,5	4,5
75	79	4	—	—	79,5	4,5
80	84	4	84,5	4,5	85	5
85	—	—	89,75	4,75	—	—
90	94,5	4,5	95	5	95	5
95	99,5	4,5	—	—	—	—
100	104,5	4,5	105,5	5,5	105,5	5,5
110	115	5	115,5	5,5	115,5	5,5

Table 4 (continued)

D	D ₁	C ₁	D ₁	C ₁	D ₁	C ₁
	Diameter series					
	0		2		3	
	Dimension series					
	10		02		03	
115	120	5	—	—	—	—
120	—	—	126	6	126	6
125	130,5	5,5	131	6	—	—
130	135,5	5,5	136,5	6,5	136,5	6,5
140	146	6	146,5	6,5	147	7
145	151	6	—	—	—	—
150	156	6	157	7	157,5	7,5
160	166,5	6,5	167,5	7,5	167,5	7,5
170	177	7	178	8	178,5	8,5
180	187	7	188,5	8,5	188,5	8,5
190	—	—	199	9	199	9
200	208,5	8,5	209,5	9,5	209,5	9,5
210	218,5	8,5	—	—	—	—
215	—	—	225	10	225	10
225	234	9	—	—	236	11
230	—	—	240	10	—	—
240	249,5	9,5	—	—	251	11
250	—	—	261	11	—	—
260	270,5	10,5	—	—	272	12
270	—	—	282	12	—	—
280	291,5	11,5	—	—	294	14

Bibliography

- [1] ISO 15, *Rolling bearings — Radial bearings — Boundary dimensions, general plan*
- [2] ISO 492, *Rolling bearings — Radial bearings — Geometrical product specifications (GPS) and tolerance values*

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