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रेडियल बॉल बियरिंग्स — फ्लैज आयाम

(दूसरा पुनरीक्षण)

Rolling Bearings — Radial Ball
Bearings with Flanged Outer Ring —
Flange Dimensions

(Second Revision)

ICS 21.100.20

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भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS
मानक भवन, 9 बहादुर शाह ज़फर मार्ग, नई दिल्ली - 110002
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI - 110002
www.bis.gov.in www.standardsbis.in

NATIONAL FOREWORD

This Indian Standard (Second Revision) which is identical to ISO 8443 : 2022 'Rolling bearings — Radial ball bearings with flanged outer ring — Flange dimensions' issued by the International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendation of the Bearing Sectional Committee and approval of the Production and General Engineering Division Council.

This standard was first published in 1985 and subsequently revised in 2018. First revision was based on ISO 8443 : 2010 'Rolling bearings — Radial ball bearings with flanged outer ring — Flange dimension', issued by the International Organization for Standardization (ISO). In this second revision of this standard has been undertaken to align it with the latest version of ISO 8443.

The major changes incorporated in this revision are as follows:

- a) Tolerances of the flanges for instrument precision bearing are no longer referred to in this edition due to withdrawal of IS 6548; and
- b) Figure 1 has been modified.

The text of ISO standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'; and
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to the following International Standard for which Indian Standard also exists. The corresponding Indian Standard which is to be substituted in its place is given below along with its degree of equivalence for the edition indicated.

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 5593 Rolling bearings — Vocabulary	IS 2399 : 2024/ISO 5593 : 2023 Rolling bearings — Vocabulary (<i>third revision</i>)	Identical

The Committee has reviewed the provisions of the following International Standard referred in this adopted standard and has decided that it is acceptable for use in conjunction with this standard:

<i>International Standard</i>	<i>Title</i>
ISO 15241	Rolling bearings — Symbols for physical quantities

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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Indian Standard

ROLLING BEARINGS — RADIAL BALL BEARINGS WITH FLANGED OUTER RING — FLANGE DIMENSIONS

(*Second Revision*)

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:

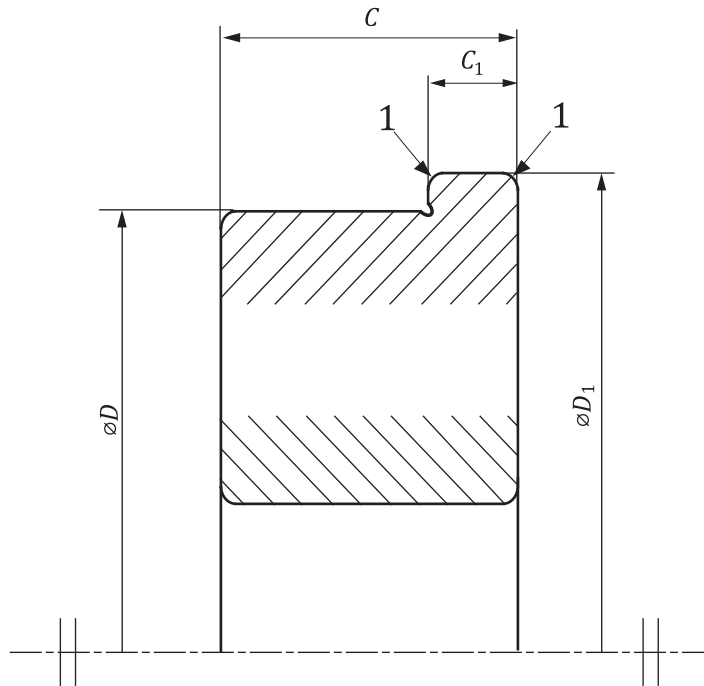
- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

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

<i>D</i>	<i>D</i> ₁	<i>C</i> 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*

Bureau of Indian Standards

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BUREAU OF INDIAN STANDARDS

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002

Telephones: 2323 0131, 2323 3375, 2323 9402

Website: www.bis.gov.in

Regional Offices:

	Telephones
Central : 601/A, Konnectus Tower -1, 6 th Floor, DMRC Building, Bhavbhuti Marg, New Delhi 110002	{ 2323 7617
Eastern : 8 th Floor, Plot No 7/7 & 7/8, CP Block, Sector V, Salt Lake, Kolkata, West Bengal 700091	{ 2367 0012 2320 9474
Northern : Plot No. 4-A, Sector 27-B, Madhya Marg, Chandigarh 160019	{ 265 9930
Southern : C.I.T. Campus, IV Cross Road, Taramani, Chennai 600113	{ 2254 1442 2254 1216
Western : Plot No. E-9, Road No.-8, MIDC, Andheri (East), Mumbai 400093	{ 2821 8093

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