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Rolling bearings — Cylindrical roller bearings, separate thrust collars — Boundary dimensions

Roulements — Roulements à rouleaux cylindriques, bagues d'épaulement séparées — Dimensions d'encombrement

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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 246 was prepared by Technical Committee ISO/TC 4, *Rolling bearings*.

This third edition cancels and replaces the second edition (ISO 246:1995), which has been technically revised.

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Rolling bearings — Cylindrical roller bearings, separate thrust collars — Boundary dimensions

1 Scope

This International Standard specifies the width, the maximum outside diameter, the bore and the bore minimum chamfer of separate thrust collars for cylindrical roller bearings in diameter series 0, 2, 3, and 4 as specified in ISO 15.

Dimensions for overall width and other geometrical features are not specified as they are dependent on the internal design of the bearings.

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.

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ISO 15, *Rolling bearings — Radial bearings — Boundary dimensions, general plan*

ISO 582, *Rolling bearings — Chamfer dimensions — Maximum values*

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ISO 5593, *Rolling bearings — Vocabulary*

ISO 15241, *Rolling bearings — Symbols for quantities*

3 Terms and definitions

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

4 Symbols

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

The symbols shown in Figure 1 and the values given in Table 1 and Table 2 denote nominal dimensions unless specified otherwise.

B_1 width of thrust collar protruding beyond inner ring face

d bore diameter

d_1 outside diameter

r_1 chamfer dimension

$r_{1s\ min}$ smallest single chamfer dimension

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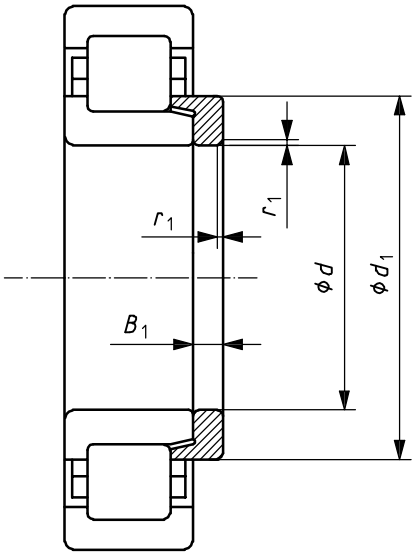

Figure 1 — Cylindrical roller bearing with separate thrust collar

5 Dimensions

Dimensions of separate thrust collars for cylindrical roller bearings of diameter series 0, 2, 3, and 4 (standard design) and diameter series 2E and 3E (E-design) are given in Table 1 and Table 2 respectively.

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NOTE For radial cylindrical roller bearings series 2E and 3E, the E signifies that they are of the design having reinforced roller and cage assembly and increased radial load-carrying capacity.

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Table 1 — Separate thrust collars for cylindrical roller bearings of standard design

Dimensions in millimetres

d	Diameter series 0			Diameter series 2			Diameter series 3			Diameter series 4		
	B_1	d_1 max.	$r_{1s\,min}$[a]	B_1	d_1 max.	$r_{1s\,min}$[a]	B_1	d_1 max.	$r_{1s\,min}$[a]	B_1	d_1 max.	$r_{1s\,min}$[a]
15	—	—	—	2,5	22	0,3	—	—	—	—	—	—
17	—	—	—	3	26	0,3	3	31	0,6	—	—	—
20	—	—	—	3	31	0,6	4	35	0,6	—	—	—
25	3	33	0,3	3	36	0,6	4	41	1,1	6	51	1,5
30	3	39	0,6	4	43	0,6	5	49	1,1	7	51	1,5
35	4	45	0,6	4	49	0,6	6	55	1,1	8	59,5	1,5
40	4	50	0,6	5	55	1,1	7	61	1,5	8	65	2
45	4	56	0,6	5	60	1,1	7	69	1,5	8	72	2
50	4	61	0,6	5	65	1,1	8	74	2	9	79	2,1
55	5	68	1	6	72	1,1	9	82	2	10	85,5	2,1
60	5	73	1	6	79	1,5	9	91	2,1	10	92	2,1
65	5	78	1	6	87	1,5	10	96	2,1	11	99	2,1
70	5	84,5	1	7	91	1,5	10	107	2,1	12	111	3
75	5	89,5	1	7	96	1,5	11	110	2,1	13	116,5	3
80	6	96	1	8	105	2	11	121	2,1	13	123	3
85	6	101	1	8	110	2	12	127	3	14	126,5	4
90	6	108	1,1	9	116	2	12	133	3	14	137,5	4
95	6	113	1,1	9	123	2,1	13	141	3	15	147,5	4
100	6	118	1,1	10	130	2,1	13	147	3	16	154	4
105	7	125	1,1	10	136	2,1	13	154	3	16	160	4
110	7	131,5	1,1	11	144	2,1	14	163	3	17	171,5	4
120	7	141,5	1,1	11	155	2,1	14	175	3	17	188,5	5
130	8	155	1,1	11	170	3	14	185	4	18	208	5
140	8	165	1,1	11	182	3	15	204	4	18	226	5
150	9,5	177	1,5	12	195	3	15	214	4	20	236	5
160	10	189	1,5	12	208	3	15	227	4	20	249	5
170	11	202	2,1	12	225	4	16	246	4	20	269	5
180	12	215,5	2,1	12	236	4	17	256	4	23	281	6
190	12	225	2,1	13	246	4	18	268	5	23	294	6
200	13	240	2,1	14	260	4	18	283	5	24	305	6
220	14	262	3	15	287	4	20	311	5	26	340	6
240	14	282,5	3	16	316	4	22	337	5	28	370	6
260	16	310	4	18	343	5	24	365	6	—	—	—
280	16	330	4	—	—	—	—	—	—	—	—	—
300	19	357	4	—	—	—	—	—	—	—	—	—
320	19	377	4	—	—	—	—	—	—	—	—	—
340	21	404	5	—	—	—	—	—	—	—	—	—
360	21	424	5	—	—	—	—	—	—	—	—	—
380	21	444	5	—	—	—	—	—	—	—	—	—
400	23	471	5	—	—	—	—	—	—	—	—	—
420	23	491	5	—	—	—	—	—	—	—	—	—
440	24	515	6	—	—	—	—	—	—	—	—	—
460	25	539	6	—	—	—	—	—	—	—	—	—
480	25	559	6	—	—	—	—	—	—	—	—	—
500	25	579	6	—	—	—	—	—	—	—	—	—

[a] Maximum chamfer dimensions are given in ISO 582.

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Table 2 — Separate thrust collars for cylindrical roller bearings of E-design

Dimensions in millimetres

d	Diameter series 2E			Diameter series 3E		
	B_1	d_1 max.	$r_{1s\ min}$ [a]	B_1	d_1 max.	$r_{1s\ min}$ [a]
15	2,5	22	0,3	—	—	—
17	3	25,5	0,3	3	28	0,6
20	3	30,5	0,6	4	32	0,6
25	3	35,5	0,6	4	39	1,1
30	4	42	0,6	5	45,5	1,1
35	4	48,5	0,6	6	51,5	1,1
40	5	54,5	1,1	7	58	1,5
45	5	59,5	1,1	7	65	1,5
50	5	65	1,1	8	71,5	2
55	6	71	1,1	9	78	2
60	6	78	1,5	9	84,5	2,1
65	6	85	1,5	10	91	2,1
70	7	90	1,5	10	97,5	2,1
75	7	94,5	1,5	11	105	2,1
80	8	102	2	11	111	2,1
85	8	108	2	12	119	3
90	9	115	2	12	125	3
95	9	122	2,1	13	133	3
100	10	128	2,1	13	140	3
105	—	—	—	13	147	3
110	11	142	2,1	14	156	3
120	11	154	2,1	14	169	3
130	11	165	3	14	183	4
140	11	180	3	15	196	4
150	12	194	3	15	211	4
160	12	209	3	15	223	4
170	12	221	4	16	238	4
180	12	233	4	17	252	4
190	13	245	4	18	266	5
200	14	259	4	18	280	5
220	15	286	4	20	306	5
240	16	313	4	22	332	5
260	18	339	5	24	364	6
280	18	359	5	26	391	6

[a] Maximum chamfer dimensions are given in ISO 582.

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