



SLOVENSKI STANDARD SIST ISO 15:2015

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Nadomešča:
SIST ISO 15:1995

Kotalni ležaji - Radialni ležaji - Glavne mere, preglednice mer

Rolling bearings - Radial bearings - Boundary dimensions, general plan

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Roulements - Roulements radiaux - Dimensions d'encombrement, plan général
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Ta slovenski standard je istoveten z: ~~SIST ISO 15:2011~~ ISO 15:2011

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ICS:

21.100.20 Kotalni ležaji Rolling bearings

SIST ISO 15:2015

en,fr

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INTERNATIONAL STANDARD

ISO 15

Third edition
2011-03-01

Rolling bearings — Radial bearings — Boundary dimensions, general plan

*Roulements — Roulements radiaux — Dimensions d'encombrement,
plan général*

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Reference number
ISO 15:2011(E)

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ISO 15:2011(E)

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

This third edition cancels and replaces the second edition (ISO 15:1998), of which it constitutes a minor revision, mainly to update references and terminology.

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Introduction

The object of the general plan (this International Standard) is to restrict the number of radial bearing sizes enough to ensure economic production, yet to provide a sufficient number of sizes to satisfy present and future needs of bearing users.

These needs are comprehensive and varying. Therefore, the general plan needs to embrace a wide range of numerically determined sizes and proportions and can even be extended according to the guidelines given in Annex A.

Tapered roller bearings, insert bearings and some types of needle roller bearings and instrument precision bearings standardized by ISO do not conform to this International Standard because the dimensions given are not found to be optimal for the bearings in question.

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Rolling bearings — Radial bearings — Boundary dimensions, general plan

1 Scope

This International Standard specifies preferred boundary dimensions for radial bearings of the diameter series 7, 8, 9, 0, 1, 2, 3 and 4.

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 464, *Rolling bearings — Radial bearings with locating snap ring — Dimensions and tolerances*

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

ISO 5593, *Rolling bearings — Vocabulary*

ISO 12043, *Rolling bearings — Single-row cylindrical roller bearings — Chamfer dimensions for loose rib and non-rib sides*

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ISO 12044, *Rolling bearings — Single-row angular contact ball bearings — Chamfer dimensions for outer ring non-thrust side*

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 given in Tables 1 to 8 denote nominal dimensions, unless specified otherwise.

| | |
|--------------|-----------------------------------|
| B | bearing width |
| D | bearing outside diameter |
| d | bearing bore diameter |
| r | chamfer dimension |
| $r_{s \min}$ | smallest single chamfer dimension |

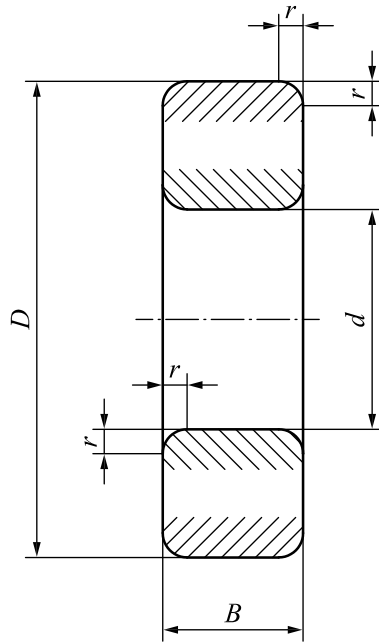


Figure 1 — Radial bearing

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5 Boundary dimensions

Boundary dimensions for radial bearings of the diameter series 7, 8, 9, 0, 1, 2, 3 and 4 are given in Tables 1 to 8.

The chamfer dimensions given in Tables 1 to 8 do not always apply to:
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- the groove side of bearing rings with snap ring groove; these are specified in ISO 464;
- the loose rib and the non-rib sides of cylindrical roller bearing rings; the exceptions are specified in ISO 12043;
- the non-thrust side of angular contact bearing outer rings; these are specified in ISO 12044.

Chamfer dimension, r , applies at the corners indicated in Figure 1 and is specified with $r_{s \min}$ in Tables 1 to 8.

The chamfer dimensions for inner rings of bearings with tapered bore may be smaller than those shown in Tables 1 to 8.

The corresponding largest single chamfer dimensions to the $r_{s \min}$ dimensions in Tables 1 to 8 are given in ISO 582.

Table 1 — Diameter series 7

Dimensions in millimetres

| <i>d</i> | <i>D</i> | Dimension series | | | | <i>r</i> _s min |
|----------|----------|------------------|-----|-----|----|---------------------------|
| | | 17 | 27 | 37 | 47 | |
| | | <i>B</i> | | | | |
| 0,6 | 2 | 0,8 | — | — | — | 0,05 |
| 1 | 2,5 | 1 | — | — | — | 0,05 |
| 1,5 | 3 | 1 | — | 1,8 | — | 0,05 |
| 2 | 4 | 1,2 | — | 2 | — | 0,05 |
| 2,5 | 5 | 1,5 | 1,8 | 2,3 | — | 0,08 |
| 3 | 6 | 2 | 2,5 | 3 | — | 0,08 |
| 4 | 7 | 2 | 2,5 | 3 | — | 0,08 |
| 5 | 8 | 2 | 2,5 | 3 | — | 0,08 |
| 6 | 10 | 2,5 | 3 | 3,5 | — | 0,1 |
| 7 | 11 | 2,5 | 3 | 3,5 | — | 0,1 |
| 8 | 12 | 2,5 | — | 3,5 | — | 0,1 |
| 9 | 14 | 3 | — | 4,5 | — | 0,1 |
| 10 | 15 | 3 | — | 4,5 | — | 0,1 |
| 12 | 18 | 4 | — | 5 | — | 0,2 |
| 15 | 21 | 4 | — | 5 | — | 0,2 |
| 17 | 23 | 4 | — | 5 | — | 0,2 |
| 20 | 27 | 4 | — | 5 | 7 | 0,2 |
| 22 | 30 | 4 | — | 5 | 7 | 0,2 |
| 25 | 32 | 4 | — | 5 | 7 | 0,2 |
| 28 | 35 | 4 | — | 5 | 7 | 0,2 |
| 30 | 37 | 4 | — | 5 | 7 | 0,2 |
| 32 | 40 | 4 | — | 6 | 8 | 0,2 |
| 35 | 44 | 5 | — | 7 | 9 | 0,3 |
| 40 | 50 | 6 | — | 8 | 10 | 0,3 |
| 45 | 55 | 6 | — | 8 | 10 | 0,3 |
| 50 | 62 | 6 | — | 10 | 12 | 0,3 |
| 55 | 68 | 7 | — | 10 | 13 | 0,3 |
| 60 | 75 | 7 | — | 12 | 15 | 0,3 |
| 65 | 80 | 7 | — | 12 | 15 | 0,3 |
| 70 | 85 | 7 | — | 12 | 15 | 0,3 |
| 75 | 90 | 7 | — | 12 | 15 | 0,3 |
| 80 | 95 | 7 | — | 12 | 15 | 0,3 |
| 85 | 105 | 10 | — | 15 | — | 0,6 |
| 90 | 110 | 10 | — | 15 | — | 0,6 |
| 95 | 115 | 10 | — | 15 | — | 0,6 |
| 100 | 120 | 10 | — | 15 | — | 0,6 |
| 105 | 125 | 10 | — | 15 | — | 0,6 |
| 110 | 135 | 13 | — | 19 | — | 1 |
| 120 | 145 | 13 | — | 19 | — | 1 |
| 130 | 160 | 16 | — | 23 | — | 1 |
| 140 | 170 | 16 | — | 23 | — | 1 |
| 150 | 180 | 16 | — | 23 | — | 1 |
| 160 | 190 | 16 | — | 23 | — | 1 |
| 170 | 200 | 16 | — | 23 | — | 1 |
| 180 | 215 | 18 | — | 26 | — | 1,1 |
| 190 | 230 | 20 | — | 30 | — | 1,1 |
| 200 | 240 | 20 | — | 30 | — | 1,1 |