SLOVENSKI STANDARD
SIST ISO 464:2016

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Nadomešča:
SIST ISO 464:2001

Kotalni ležaji - Radialni kotalni ležaji z utorom za vskočnik - Specifikacija geometrijskih veličin izdelka (GPS) in vrednosti tolerance

Rolling bearings - Radial bearings with locating snap ring - Dimensions, geometrical product specifications (GPS) and tolerance values

Roulements - Roulements radiaux à segment d'arrêt - Dimensions, spécification géométrique des produits (GPS) et valeurs de tolérance

Ta slovenski standard je istoveten z: **ISO 464:2015**

ICS:

21.100.20	Kotalni ležaji	Rolling bearings

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INTERNATIONAL STANDARD

ISO 464

Third edition
2015-11-01

Rolling bearings — Radial bearings with locating snap ring — Dimensions, geometrical product specifications (GPS) and tolerance values

Roulements — Roulements radiaux à segment d'arrêt — Dimensions, spécification géométrique des produits (GPS) et valeurs de tolérance

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Contents

Page

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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 4, *Rolling bearings*, Subcommittee SC 4, *Tolerances, tolerance definitions and symbols (including GPS)*.

This third edition cancels and replaces the second edition (ISO 464:1995), of which it constitutes a technical revision with the following changes:

— implementation of Geometrical Product Specifications (GPS);

— different presentation of the tables.

Introduction

This International Standard is a machine element geometry standard as defined in the geometrical product specification (GPS) system as presented in the matrix model of ISO 14638[7].

The fundamental rules of ISO/GPS given in ISO 8015[3] apply to this International Standard and the default decision rules given in ISO 14253-1[5] apply to the specifications made in accordance with this International Standard, unless otherwise indicated.

The connection between functional requirements, measuring technique and measuring uncertainty is always intended to be considered. The traditionally used measuring technique is described in ISO 1132-2[2]. For measurement uncertainty it is intended that ISO 14253-2[6] should be considered.

For small radial bearings, when D < 30 mm, manufacturing a snap ring groove might distort the raceways. As such, it is recommended to use bearings with a flanged outer ring instead. Information about snap ring grooves and snap rings for these small bearings can be found in Annexes A and B.

Annexes C and D contain informative information on snap ring material and an example of correct application.

Annex E contains an example of a real drawing indication of a snap ring groove.

Rolling bearings — Radial bearings with locating snap ring — Dimensions, geometrical product specifications (GPS) and tolerance values

1 Scope

This International Standard specifies the snap ring groove dimensions and tolerance values, chamfer dimensions on the snap ring groove side of the outer ring, and the snap ring dimensions and tolerance values for radial bearings in the dimension series 18 and 19 and the diameter series 0, 2, 3, and 4 (except dimension series 00, 82, and 83), as specified in ISO 15[1].

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

ISO 1101, *Geometrical product specifications (GPS) — Geometrical tolerancing — Tolerances of form, orientation, location and run-out*

ISO 5593, *Rolling bearings — Vocabulary*

ISO 14405-1, *Geometrical product specifications (GPS) — Dimensional tolerancing — Part 1: Linear sizes*

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 1101, ISO 5593 and ISO 14405-1 apply.

4 Symbols

See Figures 1 to 3 and Table 1.

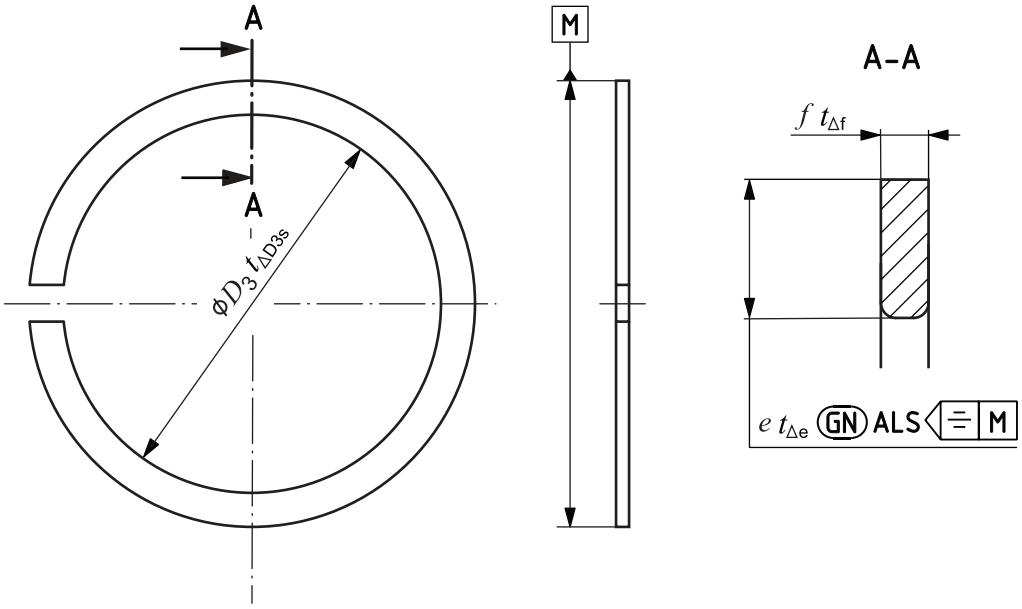
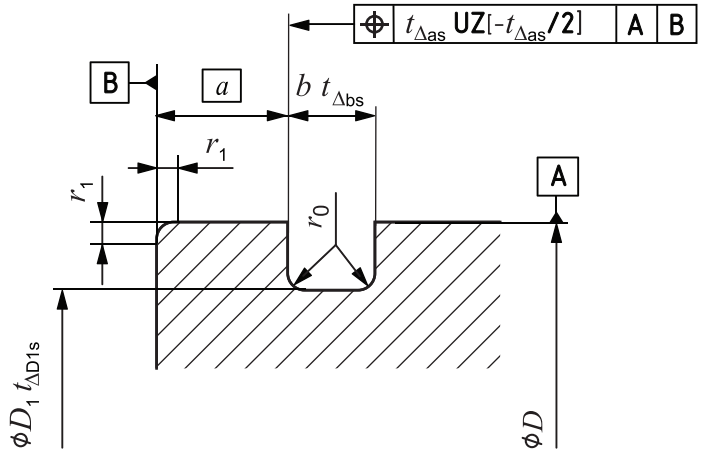


Figure 1 — Snap ring

Figure 2 — Mounted snap ring



NOTE Regarding UZ, refer to ISO 1101:2012, 10.2.

Figure 3 — Snap ring groove and chamfer

To express that the geometrical product specification (GPS) system is applied, the dimensional and geometrical characteristics shall be included in the technical product documentation (for example, on the drawing). The dimensional and geometrical specifications associated to them are described in Table 1.

A tolerance value associated to a characteristic is symbolized by t followed by the symbol of characteristic, for example $t_{\Delta as}$.

In this International Standard, the ISO default specification operator for size is in accordance with ISO 14405-1, i.e. the two-point size is valid.

In Tables 2 to 5, A.1, A.2, B.1, and B.2, the symbols U and L are used as follows:

— U = upper limit deviation

— L = lower limit deviation

An example of a real drawing indication is given in Annex E.

Table 1 — Symbols for nominal dimensions, characteristics, and specification modifiers

Symbol for nominal dimension (size and distance)[a]	Symbol for characteristic[a]	GPS symbol and specification modifier[b, c]	Description[d]
a			nominal snap ring groove location distance
	Δas	⌖	position of snap ring groove face at distance "a" with respect to secondary datum B which is constraint by primary datum A
b			nominal snap ring groove width
	Δbs	(LP)	deviation of a two-point size of snap ring groove width from its nominal size
D			nominal bearing outside diameter
D_1			nominal snap ring groove diameter
	ΔD1s	(LP)	deviation of a two-point size of snap ring groove diameter from its nominal size
D_2			nominal outside diameter of snap ring, when mounted
D_3			nominal inside diameter of snap ring, before mounting
	ΔD3s	(LP)	deviation of a two-point size of inside diameter of snap ring, before mounting, from its nominal size
e			nominal snap ring section height
	Δe	(GN) ALS ⌯ | M	deviation of a minimum circumscribed size of snap ring section height, between two opposite lines, in any longitudinal section, which includes the snap ring outside surface axis, from its nominal size

[a] Symbols given in ISO 15241 except for the used format.

[b] Symbols given in ISO 1101 and ISO 14405-1.

[c] Specification modifier (LP) shall not be indicated on a drawing, because two-point size is the default specification modifier for size.

[d] Description based on ISO 1101 and ISO 14405-1.

NOTE The full set of GPS indications can be seen in Figure 3.