



SLOVENSKI STANDARD SIST ISO 3096:2020

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Kotalni ležaji - Igličaste kotalke - Robne mere, specifikacija geometrijskih veličin izdelka (GPS) in vrednosti tolerance

Rolling bearings - Needle rollers - Boundary dimensions, geometrical product specifications (GPS) and tolerance values

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Roulements - Aiguilles - Dimensions d'encombrement, spécification géométrique des produits (GPS) et valeurs de tolérance

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Third edition
2018-07

**Rolling bearings — Needle rollers —
Boundary dimensions, geometrical
product specifications (GPS) and
tolerance values**

*Roulements — Aiguilles — Dimensions d'encombrement, spécification
géométrique des produits (GPS) et valeurs de tolérance*

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

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ISO 3096:2018(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.

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 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 the following URL: www.iso.org/iso/foreword.html. (standards.iteh.ai)

This document was prepared by Technical Committee ISO/TC 4, *Rolling bearings*, Subcommittee SC 5, *Needle, cylindrical and spherical roller bearings*. [SIST ISO 3096:2020](https://standards.iteh.ai/catalog/standards/sist/353a5892-9b82-4042-9162-d2553683d161/iso-3096:1996)
<https://standards.iteh.ai/catalog/standards/sist/353a5892-9b82-4042-9162-d2553683d161/iso-3096:1996>

This third edition cancels and replaces the second edition (ISO 3096:1996), which has been technically revised. It also incorporates the Technical Corrigendum ISO 3096:1996/Cor. 1:1999. The main changes compared to the previous edition are as follows:

- Terms, definitions, symbols and dimensional tolerance indications in figures and tables have been revised according to rules of geometrical product specification (GPS) system.
- In [Table 3](#), all dimensions have been added with $D_w = 4,5$ mm and 5,5 mm and with $L_w = 31,8$ mm and 37,8 mm.
- [Annex A](#) has been added.

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.

Introduction

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

The fundamental rules of ISO GPS given in ISO 8015 apply to this document and the default decision rules given in ISO 14253-1 apply to specifications made in accordance with this document, unless otherwise indicated.

The connection between functional requirements, measuring technique and measuring uncertainty is always intended to be considered. For measurement uncertainty, it is intended that ISO 14253-2 be considered.

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Rolling bearings — Needle rollers — Boundary dimensions, geometrical product specifications (GPS) and tolerance values

1 Scope

This document specifies dimensional and geometrical characteristics, nominal boundary dimensions and tolerance values for finished steel needle rollers used as rolling elements.

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 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*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1101, ISO 5593, ISO 14405-1 and the following apply.

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

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

3.1

needle roller diameter gauge

diameter deviation range limited by the upper and lower limits of ΔD_{wmp}

Note 1 to entry: A gauge is designated by the upper and lower limit deviation expressed in micrometres, for example $-2 -4$.

Note 2 to entry: For ΔD_{wmp} , see [Table 1](#).

3.2

needle roller diameter gauge lot

quantity of needle rollers, of the same needle roller grade and nominal dimensions, all having a mid-range size of needle roller diameter D_{wmp} within the same needle roller diameter gauge

Note 1 to entry: Needle rollers of any needle roller grade and nominal dimensions are supplied in diameter gauge lots as given in [Table 3](#).

Note 2 to entry: For D_{wmp} , see [Table 1](#).