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Fifth edition
2023-01

Rolling bearings — Needle roller bearings with drawn cup and without inner ring — Boundary dimensions, geometrical product specifications (GPS) and tolerance values

Roulements — Douilles à aiguilles sans bague intérieure — Dimensions d'encombrement, spécification géométrique des produits (GPS) et valeurs de tolérance



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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.

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).

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For an explanation of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 4, *Rolling bearings*, Subcommittee SC 5, *Needle, cylindrical and spherical roller bearings*.

This fifth edition cancels and replaces the fourth edition (ISO 3245:2015), which has been technically revised.

The main changes are as follows:

- [Figure 1 a\)](#) has been updated;
- the symbol for characteristic ΔF_w s has been replaced with ΔF_{wgn} ;
- [Annex B](#) on measuring and verification methods 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.

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Introduction

This document is a machine element geometry standard as defined in the geometrical product specification system (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.

Recommended values for the tolerances for shaft raceway and housing bore are given in [Annex A](#).

Guidelines for measurement and verification of the specific characteristic of needle roller bearings with drawn cup and without inner ring are given in [Annex B](#).