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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 27556-2025

Replacing GB/T 27556-2011

**Rolling bearings - Radial bearings, retaining slots - Dimensions,
geometrical product specifications (GPS) and tolerance values**

滚动轴承 向心轴承定位槽 尺寸、产品几何技术规范 (GPS) 和公差值
(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document supersedes GB/T 27556-2011 "Dimensions and Tolerances of Locating Grooves for Rolling Bearings and Radial Bearings", and is consistent with GB/T 27556-Compared to 2011, aside from structural adjustments and editorial changes, the main technical changes are as follows.

- a) The labeling of the positioning groove has been changed (see Figures 1 and 2, Figure 1 in the 2011 version);
- b) The position specification for the bottom surface of the positioning groove was changed from controlling distance to controlling position degree, and the tolerance value was recalculated and rounded (see Figure 1).

Figures 2, Tables 3 and 4 (Figures 1, Tables 3 and 4 from the 2011 edition).

This document adopts ISO 20515:2021 "Rolling bearings, radial bearings, locating groove dimensions, product geometry technical specifications (GPS)".

and tolerance values.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Machinery Industry Federation.

This document is under the jurisdiction of the National Technical Committee on Standardization of Rolling Bearings (SAC/TC98).

Introduction

This document specifies the geometric elements of mechanical parts as defined in the Product Geometry Specification (GPS) system (see the matrix model of ISO 14638[5]). standard.

Unless otherwise specified, the basic principles of ISO/GPS given in ISO 8015[2] apply to this document, and the principles given in ISO 14253-1[3] apply to this document.

The default principle applies to the technical specifications developed in accordance with this document.

The relationship between functional requirements and measurement methods, as well as measurement uncertainty, should be considered. Special attention should be paid to measurement uncertainty.

ISO 14253-2[4].

Rolling bearing radial bearing positioning groove Dimensions, Product Geometry Specifications (GPS), and Tolerances

1 Scope

This document specifies the dimensions and tolerances of the locating grooves on the outer rings of single-row angular contact ball bearings, four-point contact ball bearings, and cylindrical roller bearings.

Locating grooves are not suitable for use on the outer rings of sealed and dustproof radial ball bearings, nor are they suitable for use on the outer rings of unflanged cylindrical roller bearings.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

ISO 15 General Dimensions of Rolling Bearings - Radial Bearings - Boundary dimensions, general plan) Note. GB/T 273.3-2020 General scheme for the external dimensions of rolling bearings - Part 3: Radial bearings (ISO 15:2017, IDT) ISO 1101 Product Geometric Specification (GPS) - Geometric Tolerances. Shape, Orientation, Position and Runout Tolerances run-out Note. GB/T 1182-2018 Product Geometric Specification (GPS) -

Geometric Tolerances - Shape, Orientation, Position and Runout Tolerances (ISO 1101:2017, MOD)

ISO 5593 Rolling Bearings Vocabulary Note. GB/T 6930-2024 Rolling Bearings Vocabulary (ISO 5593:2023, IDT) ISO 14405-1 Product Geometry Specification (GPS) - Dimensional Tolerances - Part 1: Linear Dimensions Note. GB/T 38762.1-2020 Product Geometric Specification (GPS) - Dimensional Tolerances - Part 1: Linear Dimensions (ISO 14405-1:2016, MOD) Note. GB/T 7811-2015 Symbols for rolling bearing parameters (ISO 15241:2012, IDT) ISO 22872 Geometric Specification for Rolling Bearings (GPS) - Vocabulary and Symbols [Rollingbearings-Geomet-

3 Terms and Definitions

The terms and definitions defined in ISO 15, ISO 1101, ISO 5593, ISO 14405-1, ISO 15241 and ISO 22872, as well as the following terms and definitions, shall apply.

Used in this document.

Retaining slot

The inclined groove at the intersection of the outer surface of the outer ring and the end face.

Note: This groove is designed to provide a simple way to prevent the outer ring of the bearing from rotating relative to its fixed position.

[Source. ISO 5593:2019, 3.2.2.25, with modifications]