



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

GB/T 309-2021

Rolling bearings - Needle roller

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Table of Contents

foreword

Introduction

1 Scope

2 Normative references

3 Terms and Definitions

foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules of Standardization Documents"

drafted:

This document replaces GB/T 309-2000 "Rolling Bearing Needle Roller", compared with GB/T 309-2000, except for structural adjustment and editorial

In addition to the changes, the main technical changes are as follows:

- a) Some terms and symbols are deleted (see Chapter 3 of the:2000 edition);
- b) Changed the meaning of some symbols and the dimension tolerance annotations in figures and tables (see Chapter 4, Figure 1, Figure 2 and Table 3, Table 4;:2000

Edition Chapter 3, Figure 1, Figure 2 and Table 2);

- c) Added the dimensions of some needle rollers (see Table 2);
- d) Changed the detection method of chamfer size (see 7:4, 7:3 of the:2000 edition):

This document refers to ISO 3096:2018 "Outline dimensions, product geometric specifications (GPS) and tolerance values of needle rollers for rolling bearings"

Grass, the degree of consistency is non-equivalent:

Please note that some content of this document may be patented: The issuing agency of this document assumes no responsibility for identifying patents:

Introduction

This document is the number of mechanical parts specified in the Product Geometry Specification (GPS) system (see the matrix model of GB/T 20308-2020):

any element standard:

Unless otherwise specified, the basic principles of ISO /GPS given in GB/T 4249-2018 apply to this document, ISO 14253-1

The default principles given apply to technical specifications developed in accordance with this document:

It is recommended to consider the relationship between functional requirements and measurement methods and measurement uncertainty, and measurement uncertainty is recommended to pay attention to

ISO 14253-2:

rolling bearing needle

1 Scope

This document specifies the dimensions and geometric characteristics, dimensions, technical requirements, testing methods, inspection rules, marking and packaging of steel needle rollers:

This document is applicable to the production, inspection and acceptance of needle rollers and commodity needle rollers for supporting rolling bearings:

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, dated citations

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

GB/T 1182-2018 Product Geometric Specifications (GPS) Geometric Tolerance Shape, Orientation, Position and Runout Tolerance Marking

GB/T 1800:2-2020 Product Geometric Specifications (GPS) Linear Dimensional Tolerance ISO Code System Part 2: Standard

Tolerance zone code and limit deviation table of hole and shaft

GB/T 4249-2018 Product Geometric Specifications (GPS) Basic Concepts, Principles and Rules

GB/T 4380-2004 Two-point and three-point methods for evaluating roundness error

GB/T 6930 Rolling Bearing Vocabulary

GB/T 7811-2015 Rolling bearing parameter symbols

GB/T 8597-2013 Anti-rust packaging for rolling bearings

GB/T 17851-2010 Product Geometric Specification (GPS) Geometric Tolerance Datum and Datum System

GB/T 18254-2016 High carbon chromium bearing steel

GB/T 18579-2019 High carbon chromium bearing wire

GB/T 24608-2009 Inspection Rules for Rolling Bearings and Their Commodity Parts

GB/T 32324-2015 Rolling bearing roundness and waviness error measurement and evaluation method

GB/T 34891-2017 Technical conditions for heat treatment of rolling bearing high carbon chromium bearing steel parts

GB/T 38762:1-2020 Product Geometric Specifications (GPS) Dimensional Tolerances Part 1: Linear Dimensions

JB/T 6641-2017 Rolling bearing residual magnetism and its evaluation method

JB/T 7051-2006 Method for measuring and evaluating surface roughness of rolling bearing parts

3 Terms and Definitions

GB/T 1182-2018, GB/T 6930 and GB/T 38762:1-2020 as well as the following terms and definitions apply to this

document:

3:1

Needle Roller Diameter Gauge

The diameter deviation range defined by the upper and lower deviations of ΔD_{wmp} :

Note 1: The specification value is expressed by the upper and lower deviation, in μm :

Example: $-2/-4$:

Note 2: See Table 1 for ΔD_{wmp} :