



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

GB/T 7308.1-2021

**Plain bearings - Thin-walled half bearings with or without flange
- Part 1: Tolerances, design features and methods of test**

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Foreword

GB/T 7308 "Sliding bearings with flanges or thin-walled bearings without flanges" is divided into 3 parts.

---Part 1.Tolerances, structural elements and inspection methods;

---Part 2.Measurement of bearing wall thickness and flange thickness;

---Part 3.Circumference measurement.

This part is Part 1 of GB/T 7308.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB/T 7308-2008 "Tolerances, structural elements and inspection methods for sliding bearings with flanges or thin-walled bearings without flanges.

Compared with GB/T 7308-2008, the main technical changes are as follows.

---GB/T 7308.3 replaced TB/T 2958 in the normative references (see Chapter 2, Chapter 2 of the.2008 edition);

--- Change the bearing shell back roughness corresponding to the bearing seat hole diameter 80~120 in Table 2 to 1.2 (see Table 2, Table 2 of the.2008 edition);

---Added the technical requirements for the parallelism of the mouth face (see 4.5);

---Modified the formula in Figure 7;

---Revised some of the tolerance values in Table 4;

---The functions and characteristics of the combined flange bearing in Chapter 8 have been added (see Chapter 8).

This part uses the redrafting method to amend and adopt ISO 3548-1.2014 ``Sliding Bearings with Flanged or Flanged Thin-Walled Bearings Part 1

Sub. Tolerances, structural elements and inspection methods.

Compared with ISO 3548-1.2014, this part has technical differences. The corresponding technical differences and their reasons are as follows.

---Regarding normative reference documents, this section has made adjustments with technical differences to adapt to my country's technical conditions and adjustments.

The situation is collectively reflected in Chapter 2 "Normative Reference Documents", and the specific adjustments are as follows.

- * Replace ISO 4288 with GB/T 10610, which is equivalent to the international standard;

- * Deleted ISO 6524;

- * Added GB/T 7308.3.

---The numerical errors in Table 2 of ISO 3548-1.2014 have been corrected. The height of the bearing housing hole diameter from 50 to 80 is changed to 0.035; shaft

The surface roughness of the backing of the bearing hole diameter of 50-80 is changed to 0.8, and the surface roughness of the backing of the bearing hole diameter of 80-120 is changed.

It is 1.2; the second preferred wall thickness corresponding to the diameter of the bearing housing hole from 250 to 315 is changed to 6.

---In order to facilitate the actual operation, the marked position of a1 in Figure 4 is changed from the inner surface to the outer surface.

---Added the technical requirements for the parallelism of the mouth surface (see 4.5).

---According to actual production and usage, some tolerance values in Table 3 and Table 4 have been revised.

---Figure 18 and Figure 19 are modified according to the schematic diagrams of GB/T 7308.3 Method A and Method B.

Compared with ISO 3548-1.2014, this part has the following editorial differences.

---All the letters in the tables have been changed to digital ones;

---Use the symbol s_3 to indicate the wall thickness of the top of the bearing bush, and $stot$ to indicate the full wall thickness of the bearing bush;

---Use $\delta\alpha$ instead of u to indicate the amount of wall thickness reduction of the eccentric bearing at the angle α .

This part was proposed by China Machinery Industry Federation.

This part is under the jurisdiction of the National Sliding Bearing Standardization Technical Committee (SAC/TC236).

Drafting organizations of this section. China National Machinery Productivity Promotion Center, Yantai Dafeng Bearing Co., Ltd., Hubei Anda Precision Industry Co., Ltd.,

Ningbo Bearing Factory, Hangzhou Bearing Shijiazhuang Co., Ltd., Chengdu Shengsanqiang Railway Fittings Co., Ltd., Lin'an Dongfang Sliding Bearing Co., Ltd.

This part is explained by the National Standardization Technical Committee of Sliding Bearings.

The previous releases of the standards replaced by this part are as follows.

---GB/T 7308-2008.

Sliding bearings have flanges or thin-walled bushes without flanges

Part 1. Tolerances, structural elements and inspection methods

1 Scope

This part of GB/T 7308 stipulates that the outer diameter of Do to 250mm is integral with flanged thin-walled bearings and the outer diameter of Do to 500mm cannot be

Tolerances, structural elements and inspection methods of blue thin-walled bearings. Due to changes in structural design, the size of the bearing bush is not uniformly specified.

Bearings that comply with this section are mainly used for reciprocating engines, and the bearing is composed of a steel back and one or more layers of bearing alloys inside.

On reciprocating engines, flanged bearings and flangeless bearings can be used at the same time.

The flangeless bearing can be used together with two semicircular thrust washers (thrust plates) conforming to GB/T 10447, or a combined flange bearing,

Replace the integral flange bearing.

Note. All dimensions and tolerances are in millimeters.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated reference documents, the latest version (including all amendments) is applicable to this document.

GB/T 7308.3 Sliding bearing has flange or flangeless thin-walled bearing part

3. Circumference measurement (GB/T 7308.3-2021,

ISO 3548-3:2012, MOD)

GB/T 10447 Plain bearing semicircular thrust washer elements and tolerances (GB/T 10447-2008, ISO 6526.1983, IDT)

GB/T 10610 Product Geometric Technical Specification Surface Structure Profile Method Rules and Methods for Evaluating Surface Structure

(GB/T 10610-2009, ISO 4288.1996, IDT)

3 symbols

See Figure 1, Figure 2 and Table 1.