

ICS 83.140.99

CCS G 47



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

GB 20688.4-2007

Replacing GB/T 20688.4-2007

Rubber bearings - Part 4: Normal rubber bearings

橡胶支座 第4部分：普通橡胶支座

(English Translation)

Issued on: September 7, 2023

Implemented on: April 1, 2024

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

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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 is Part 4 of GB/T 20688 "Rubber Bearings". GB/T 20688 has released the following parts.

- Part 1: Test methods for isolation rubber bearings;
- Part 2: Bridge isolation rubber bearings;
- Part 3: Building isolation rubber bearings;
- Part 4: Ordinary rubber bearings;
- Part 5: Building isolation elastic skateboard bearings.

This document replaces GB/T 20688.4-2007 "Rubber Bearings Part 4: Ordinary Rubber Bearings" and is the same as GB/T 20688.4-2007 in comparison, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- Changed the range of design vertical bearing capacity of ordinary rubber bearings (see Chapter 1, Chapter 1 of the 2007 edition);
- Added and changed terms and definitions (see Chapter 3, Chapter 3 of the 2007 edition);
- Added and changed symbols (see Chapter 4, Chapter 4 of the 2007 edition);
- Added the classification of type I and type II plate bearings, and changed the name code (see 5.1.1, 5.1.1 of the 2007 edition);
- The classification of pot-type bearings has been changed, the anti-seismic fixed bearings have been deleted, and the one-way movable bearings have been adjusted to longitudinal movable pot-type bearings and Laterally movable pot-type bearings (see 5.1.2, 6.1.1.1 of the 2007 edition), the classification of force-measuring pot-type bearings has been added (see 5.1.2);
- Changed the marking method of plate supports (see 5.2.1.1, 5.1.2.1 of the 2007 edition);
- Changed the marking method of basin supports and the marking method of displacement (see 5.2.1.2, 6.1.2.1 of the 2007 edition);
- Added plate bearing specification series, deformation description of plate bearing normal use state and design service life of ordinary rubber bearing requirements (see 6.1.1, 6.2.1);

---Changed the design requirements for the thickness of the rubber protective layer on the side of the plate bearing (see 6.1.4, 5.2.3 of the 2007 edition);

---Added the design requirements for the thickness of the silicone rubber protective ring of type II plate bearing (see 6.1.5);

---Added the structure and support anchoring type of the sliding plate bearing equipped with supporting steel plate, stainless steel cold-rolled steel plate, anchor bolt assembly and dust cover Formula (see 6.1.7);

---Added basin bearing anchor component structure and anchoring type (see 6.2.2~6.2.4);

---Deleted the thickness design requirements for the upper seat plate (see 6.2.4 of the 2007 edition);

---Changed the guide structure of the basin bearing and the structural design requirements of the plane sliding pair (see 6.2.5~6.2.7, 6.2.7~ of the 2007 edition 6.2.8), added the requirements for the setting of the sliding pair sealing ring and the structural design requirements for the force measuring basin support (see 6.2.6, 6.2.8);

---Changed the roughness of the lower surface of the pelvic cavity and the middle steel lining (see 6.2.10, 6.3.4.4 of the 2007 version);

---Changed the compressive stress design values of rubber pressure-bearing plates and sliding plates, and the thickness design requirements of rubber pressure-bearing plates (see 6.2.11, 6.2.12, 2007 version 6.2.5, 6.2.6);

---Changed the requirements for mechanical properties of finished plate bearings (see 7.1.1, 5.3.1 of the 2007 edition);

---The physical performance requirements of rubber materials for plate supports have been changed, and the physical properties of rubber materials for silicone rubber protective rings of type II plate supports have been added.

Mechanical performance requirements (see 7.1.2.1, 5.3.2.1 of the 2007 edition);

---Added the types of skateboard materials used for plate supports and the friction coefficient requirements for skateboard materials (see 7.1.2.2);

---Added the material requirements for supporting steel plates of plate bearings (see 7.1.2.3), and changed the internal stiffening steel plates and sliding plates of the bearing body.

Material requirements for stainless steel cold-rolled steel plates used in supporting bearings (see 7.1.2.3, 5.3.2.3 and 5.3.2.4 of the 2007 edition);

---Added material requirements for anchor bolt components (see 7.1.2.4, 7.2.2.5);

---Changed the requirements for surface flatness of plate bearings (see 7.1.4, 5.3.4 of the

2007 edition), and added the appearance quality of the silicone rubber protective ring Quantitative requirements (see 7.1.4);

---The requirements for plane size deviation of plate supports have been changed (see 7.1.5.1, 5.3.5.1 of the 2007 edition), and the thickness of plate supports has been increased in addition to the dimensional deviation requirements of 150mm (see 7.1.5.2), the dimensional deviation requirements for other steel plates except stiffened steel plates are added (see 7.1.5.3), the maximum deviation of surface flatness after welding of stainless steel cold-rolled steel plate and matching upper steel plate is added (see 7.1.5.5), added the thickness deviation requirements of silicone rubber protective rings for type II plate bearings are specified (see 7.1.5.6);

--- Added requirements for welding, anti-corrosion, assembly and other processes (see 7.1.6, 7.2.6);

---The classification of the horizontal bearing capacity of basin bearings has been changed (see 7.2.1.2, 6.3.1.2 of the 2007 edition), and the movable bearings below Friction coefficient at -25°C (see 6.3.1.4 of the 2007 edition);

---Changed the requirements for basin support corner (see 7.2.1.3, 6.3.1.3 of the 2007 edition);

--- Added displacement classification and force measurement performance requirements for pot-type bearings (see 7.2.1.5, 7.2.1.6);

---Changed the physical performance requirements for rubber materials for basin supports (see 7.2.2.1, 6.3.2.1 of the 2007 edition);

---Changed the requirements for the slide plate material for basin supports (see 7.2.2.2, 6.3.2.2 of the 2007 edition);

---Changed the material requirements for pot bearing steel castings and steel plates (see 7.2.2.3, 7.2.2.4, 6.3.2.3~6.3.2.5 of the 2007 edition);

---Added pressure transmitter for force measuring basin support, pot bearing SF-1 slider material and performance indicators of the slider and force measuring basin support.

Requirements for dimethyl silicone oil for seats (see 7.2.2.8~7.2.2.10);

---Intrinsic quality requirements for basin supports have been added (see 7.2.3);

---Changed the appearance quality requirements of skateboards (see 7.2.4.2, 6.3.3.2 of the 2007 edition), adding steel castings, stainless steel cold-rolled steel Appearance quality requirements for plates, SF-1 sliders and finished bearing assemblies (see 7.2.4.3~7.2.4.6);

---The diameter size deviation of the rubber pressure-bearing plate of the pot bearing has been changed (see 7.2.5.1, 6.3.4.1 of the 2007 edition), and the diameter of the slide plate has been changed.