



# SLOVENSKI STANDARD

## SIST ISO 3548-2:2010

01-februar-2010

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8 fgb]`YyUJ`!`HUb\_cgHyb]`dc`c j ] b]`YyUJ`g`df]fcVb]Wb`U]`VfYn`b`Y`!`&`XY`.`A Yf`Yb`Y`XYVY]b`ghYbY]b`df]fcVb]W

Plain bearings - Thin-walled half bearings with or without flange - Part 2: Measurement of wall thickness and flange thickness

Gleitlager - Dünnwandige Lagerschalen mit oder ohne Bund - Teil 2: Messung der Wanddicke

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Paliers lisses - Demi-coussinets minces à ou sans collerette - Partie 2: Mesurage de l'épaisseur de paroi et de l'épaisseur de collerette

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**Ta slovenski standard je istoveten z: ISO 3548-2:2009**

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**ICS:**

21.100.10      Drsni ležaji      Plain bearings

**SIST ISO 3548-2:2010**      en

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# INTERNATIONAL STANDARD

**ISO**  
**3548-2**

First edition  
2009-08-15

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## Plain bearings — Thin-walled half bearings with or without flange — Part 2: Measurement of wall thickness and flange thickness

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**  
*Paliers lisses — Demi-coussinets minces à collerette ou sans  
collerette —  
Partie 2: Mesurage de l'épaisseur de paroi et de l'épaisseur  
de collerette*

[SIST ISO 3548-2:2010](https://standards.iteh.ai/catalog/standards/sist/9c0f0ae3-6e3c-4c9c-a0d1-9f30e19832e6/sist-iso-3548-2-2010)

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Reference number  
ISO 3548-2:2009(E)

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Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 3548-2 was prepared by Technical Committee ISO/TC 123, *Plain bearings*, Subcommittee SC 5, *Quality analysis and assurance*.

Together with ISO 3547-7, this part of ISO 3548 replaces ISO 12306, which has been cancelled.

ISO 3548 consists of the following parts, under the general title *Plain bearings — Thin-walled half bearings with or without flange*:

- SIST ISO 3548-2:2010  
<http://standards.iteh.ai/catalog/standards/sist/9c0f0ae3-6e3c-4c9c-a0d1-9f30e19832e6/sist-iso-3548-2-2010>
- *Part 2: Measurement of wall thickness and flange thickness*

Tolerances, design features and methods of test is to form the subject of a part 1 of ISO 3548<sup>1)</sup> and the measurement of peripheral length is to form the subject of a part 3.

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1) It is intended to replace ISO 3548:1999 with ISO 3548-1.

# Plain bearings — Thin-walled half bearings with or without flange —

## Part 2: Measurement of wall thickness and flange thickness

### 1 Scope

This part of ISO 3548 specifies, in accordance with ISO 12301, the checking of the wall-thickness of thin-walled half bearings with or without flange and describes the required checking methods and measuring equipment. It applies to a maximum bearing diameter of 150 mm. If this part of ISO 3548 is applied to a greater diameter, an agreement can be formulated between the supplier and the user.

### 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3548, *Plain bearings — Thin-walled half bearings with or without flange — Tolerances, design features and methods of test*

ISO 12301, *Plain bearings — Quality control techniques and inspection of geometrical and material quality characteristics*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 3.1

##### wall thickness

$s_3$

radial distance between the opposing measuring points at the inside and the outside surface diameter

See Figure 1.

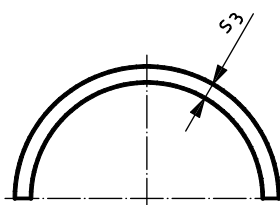


Figure 1 — Wall thickness,  $s_3$ , of a half bearing

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## 3.2

**measuring point****measuring line**

agreed points [lines] established to facilitate agreement on checking

NOTE The establishment of measuring points [lines] does not preclude the need to comply with dimensional specifications in other areas.

## 3.3

**tolerance**

range between the upper specified limit and the lower specified limit

## 3.4

**uncertainty of measurement**

deviation of the measured value from the real value caused by statistical or systemic factors

## 4 Symbols and units

For the purposes of this part of ISO 3548, the symbols and units are as given in Table 1.

**Table 1 — Symbols and units**

Symbol	Parameter	Unit
$a_{ch}$	Distance to measuring position	mm
$a_1$	Distance to measuring position, rectangular from parting line	mm
$\alpha_2$	Angle to measuring position from parting line	grad
$B$	Width	mm
$C_1$	Inner chamfer width	mm
$D_n$	Nominal outside diameter	mm
$e_B$	Eccentricity	mm
$F_{pin}$	Measuring pin load	N
$H$	Distance to measuring position from bearing parting line	mm
$s_a$	Wall thickness at angle $\alpha_2$	mm
$s_3$	Wall thickness	mm
$u$	Wall thickness reduction at angle $\alpha_2$	mm
$x_1$	Centre point of nominal outside diameter	mm
$x_2$	Centre point of eccentric bore	mm

## 5 Purpose of checking

In order to ensure the required bearing clearance and consequently the operational efficiency of the plain bearing unit, the wall thickness tolerances shall be as specified in ISO 3548.



## 6 Checking methods

### 6.1 Measuring principle

The gauging axis of the measuring device shall be in the radial direction and at a right angle to the outside surface of the test piece in order to find the minimum value of the wall thickness,  $s_3$ . The measured values may be recorded by a single measurement or by a sum of measurements (see Figure 2).

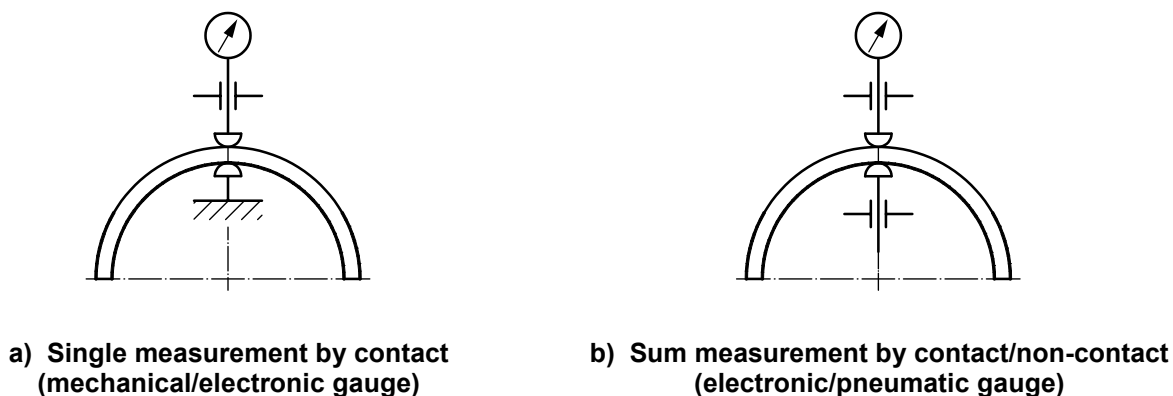


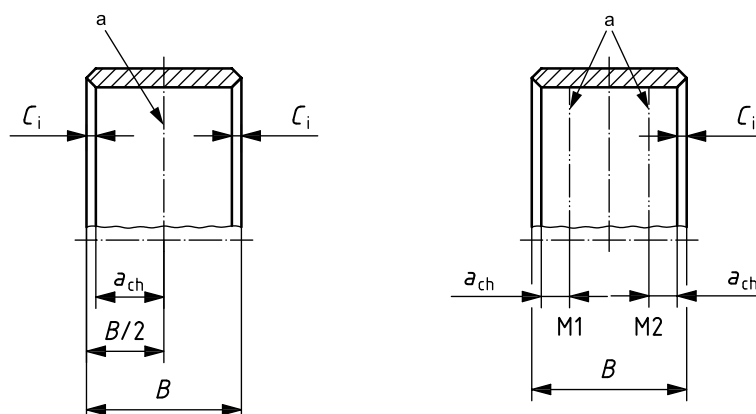
Figure 2 — Measuring principle of wall thickness measurement

The presence of lubricating holes, oil pockets, oil grooves, markings or special chamfers may require deviation from the measuring lines and measuring points specified in this clause and shall be agreed upon separately.

If any wall thickness does not conform to the specified values due to the manufacturing process, because of deformation of the bearing backing in the area of marking or at non-load bearing places, that wall thickness shall be defined separately.

### 6.2 Line measurement around the circumference

Measurement of the wall thickness around the circumference shall be carried out at the measuring lines specified in Figure 3 and Table 2.



#### Key

$C_i$  inner chamfer width

$a$  Measuring lines, M.

Figure 3 — Position of measuring lines