



SLOVENSKI STANDARD SIST ISO 10285:2008

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BUKca Yý U
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Rolling bearings - Sleeve type linear ball bearings - Boundary dimensions and tolerances

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Wälzlager - Linear-Wälzlager - Linear-Kugellager - Metrische Reihe

Roulements - Roulements linéaires à recirculation de billes, type manchon - Dimensions d'encombrement et tolérances

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**Rolling bearings — Sleeve type linear ball
bearings — Boundary dimensions and
tolerances**

*Roulements — Roulements linéaires à recirculation de billes, type
manchon — Dimensions d'encombrement et tolérances*

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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 10285 was prepared by Technical Committee ISO/TC 4, *Rolling bearings*, Subcommittee SC 11, *Linear motion rolling bearings*.

This second edition cancels and replaces the first edition (ISO 10285:1992), which has been technically revised.

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Introduction

Linear motion rolling bearings provide for linear motion as opposed to rotational motion. The sleeve type linear ball bearing described in this International Standard uses balls which circulate in a number of closed loops in the cylindrical bearing that surrounds the shaft.

Linear ball bearings are typically applied to meet one or more of the following criteria:

- a) smooth low-friction motion, free from stick-slip or chatter;
- b) low force required to produce relative linear motion between the bearing and the shaft.

These requirements, as well as others, can be met by appropriate use of the various linear motion rolling bearing types (closed sleeve type, adjustable sleeve type and open sleeve type). The appropriate selection of bearing type and specification is to be established between the manufacturer and the user.

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Rolling bearings — Sleeve type linear ball bearings — Boundary dimensions and tolerances

1 Scope

This International Standard specifies the boundary dimensions, tolerances and definitions for sleeve type linear motion ball bearings.

It is applicable to the size ranges covered by Table 1.

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 reference document (including any amendments) applies.

ISO 1132-1, *Rolling bearings — Tolerances — Part 1: Terms and definitions*

ISO 5593, *Rolling bearings — Vocabulary*

ISO 13012, *Rolling bearings — Linear motion, recirculating ball, sleeve type — Accessories*

ISO 15241, *Rolling bearings — Symbols for quantities*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1132-1, ISO 5593 and the following apply.

3.1

sleeve type linear ball bearing

linear motion ball bearing incorporating an outer sleeve with a number of closed loops of recirculating balls, which is designed to achieve unlimited linear motion along a shaft

3.2

shaft

basically cylindrical rod along which a linear ball bearing traverses

3.3

nominal bore diameter of ball complement

diameter of the theoretical cylinder inscribed inside all of the balls

3.4

nominal outer sleeve width

distance between two theoretical end faces designated to bound the width of the linear ball bearing