

Rolling bearings, linear motion, recirculating ball, sleeve type — Accessories

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee MCE/7, Rolling bearings, which has the responsibility to:

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the ISO title page, page ii, pages 1 to 16, an inside back cover and a back cover.

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INTERNATIONAL STANDARD

**ISO
13012**

First edition
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Rolling bearings, linear motion, recirculating ball, sleeve type — Accessories

*Roulements à mouvement linéaire à recirculation de billes, douilles à
billes — Accessoires*



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.

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.

International Standard ISO 13012 was prepared by Technical Committee ISO/TC 4, *Rolling bearings*, Subcommittee SC 11, *Linear motion rolling bearings*.

Descriptors: Bearings, rolling bearings, linear bearings, accessories, form specifications, dimensions, overall dimensions, dimensional tolerances, metric system.

Introduction

The use of linear motion rolling bearings can be facilitated by the selection of bearing housings, shafts, shaft support blocks and shaft support rails. These items, referred to as accessories, can aid in the application of the linear motion rolling bearings to achieve the desired criteria of smooth, accurate, low-friction linear motion free from chatter or stick-slip.

The appropriate selection of bearing housing type, shaft and shaft support should be established between the manufacturer and the user.

1 Scope

This International Standard gives the boundary dimensions and other relevant dimensions of accessories for rolling bearings, linear motion, recirculating ball, sleeve type — metric series. The essential dimensions for housings, shaft support rails and shaft support blocks are given and generally without tolerance. This standard was developed to be used with International Standard ISO 10285.

This standard includes the following accessories:

Housings:

- flangeless, closed and adjustable types for series 1
- flanged, closed and adjustable types for series 3
- flanged, open type for series 3
- flangeless, closed and adjustable types for series 3
- flangeless, open and open adjustable types for series 3

- Shaft support rails
- Shaft support rails, low height type
- Shaft support blocks, flanged type
- Shaft support blocks, flangeless type
- Shafts, Solid and tubular for linear motion rolling bearings

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 286-2:1988, *ISO system of limits and fits — Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts*.

ISO 468:1982, *Surface roughness — Parameters, their values and general rules for specifying requirements*.

ISO 3754:1976, *Steel — Determination of effective depth of hardening after flame or induction hardening*.

ISO 10285:1992, *Rolling bearings, linear motion, recirculating ball, sleeve type — Metric series*.

3 Symbols

The symbols (except those for tolerances) shown in the figures and the values given in the tables denote nominal dimensions unless specified otherwise.

3.1 Housings, flangeless, closed and adjustable types for series 1 linear motion rolling bearings

See Table 1

A	housing width
D_a	seating diameter
F_w	ball complement bore diameter (reference)
H	distance from mounting face to centreline of seating diameter
H_1	height (overall)
J	bolt hole centre distance
L	housing length

N	bolt hole diameter
N_1	threaded attachment hole

3.2 Housings, flanged, closed and adjustable types for series 3 linear motion rolling bearings

See Table 2

A	base width
A_1	seating width
D_a	seating diameter
F_w	ball complement bore diameter (reference)
H	distance from mounting face to centreline of seating diameter
H_1	feet height
H_2	height (overall)
J	bolt hole centre distance (length)
J_1	bolt hole centre distance (width)
L	base length
N	bolt hole diameter

3.3 Housings, flanged, open type for series 3 linear motion rolling bearings

See Table 3

A	housing width
A_1	seating width
D_a	seating diameter
F_w	ball complement bore diameter (reference)
G	width of sector opening (at diameter D_a)
H	distance from mounting face to centreline of seating diameter
H_1	feet height
H_2	height (overall)
J	bolt hole centre distance (length)
J_1	bolt hole centre distance (width)
N	bolt hole diameter
L	base length
α	angle of sector opening

3.4 Housings, flangeless, closed and adjustable types for series 3 linear motion rolling bearings

See Table 4

A	housing width
D_a	seating diameter
F_w	ball complement bore diameter (reference)
H	distance from mounting face to centreline of seating diameter
H_1	height (overall)
J	bolt hole centre distance (length)
J_1	bolt hole centre distance (width)
L	housing length
L_1	distance from side face to centreline of seating diameter
N	bolt hole diameter
N_1	threaded attachment hole