

BS ISO 14728-1:2017



BSI Standards Publication

Rolling bearings — Linear motion rolling bearings

Part 1: Dynamic load ratings and rating life



National foreword

This British Standard is the UK implementation of ISO 14728-1:2017. It supersedes BS ISO 14728-1:2004 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee MCE/7, Rolling bearings.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Date	Text affected
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**Rolling bearings — Linear motion
rolling bearings —**

**Part 1:
Dynamic load ratings and rating life**

Roulements — Roulements à mouvement linéaire —

Partie 1: Charges dynamiques de base et durée nominale





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Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols	7
5 Basic dynamic load ratings	8
5.1 Linear ball bearings	8
5.1.1 Recirculating linear ball bearings, sleeve type with raceway grooves	8
5.1.2 Recirculating linear ball bearings, sleeve type without raceway grooves	9
5.1.3 Recirculating linear ball bearings, linear guideway, carriage type	9
5.1.4 Non-recirculating linear ball bearings, linear guideway, deep groove and four-point-contact types	10
5.2 Linear roller bearings	11
5.2.1 Recirculating linear roller bearings, linear guideway, carriage type	11
5.2.2 Non-recirculating linear roller bearings, linear guideway, flat, V-angle and crossed roller types	11
6 Dynamic equivalent load	12
7 Basic rating life	12
Bibliography	14

Foreword

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This document was prepared by Technical Committee ISO/TC 4, *Rolling bearings*, Subcommittee SC 8, *Load ratings and life*.

This second edition cancels and replaces the first edition (ISO 14728-1:2004), of which it constitutes a minor revision with the following changes:

- improvement of [Figures 2, 4, 8](#) and [9](#);
- correction of terms and definitions (change of ball/roller guide systems to linear ball/roller bearings);
- correction of font (ϕ changed to φ);
- alignment with the latest drafting rules.

A list of parts in the ISO 14728 series can be found on the ISO website.

Introduction

It is often impractical to establish the suitability of a linear motion rolling bearing selected for a specific application by testing. The following procedures have proved to be an appropriate and convenient substitute for testing:

- life calculation with dynamic load (ISO 14728-1);
- static load safety factor calculation with static load (ISO 14728-2).

The life of a linear motion bearing is given by the distance which one of the raceways moves, in relation to the other raceway, before the first evidence of fatigue develops in the material of one of the raceways or one of the rolling elements.

The formulae for calculating the basic dynamic load ratings are derived from the theory of Lundberg^[7] and Palmgren^[8].

