
Spherical plain bearings — Method for the calculation of static and dynamic load ratings

*Rotules lisses — Méthode de calcul des charges statiques et
dynamiques de base*

Sample Document

get full document from standards.iteh.ai



Sample Document

get full document from standards.iteh.ai



COPYRIGHT PROTECTED DOCUMENT

© ISO 2017, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

	Page
Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols and units	2
5 Radial spherical plain bearings	3
5.1 Static radial load rating	3
5.2 Dynamic radial load rating	3
6 Angular contact radial spherical plain bearings	4
6.1 Static radial load rating	4
6.2 Dynamic radial load rating	4
7 Thrust spherical plain bearings	5
7.1 Static axial load rating	5
7.2 Dynamic axial load rating	5
Annex A (informative) Explanations of factors for the calculation of load ratings	7
Annex B (informative) Calculation example	8
Bibliography	9

Sample Document

get full document from standards.iteh.ai

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

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

Spherical plain bearings — Method for the calculation of static and dynamic load ratings

1 Scope

This document specifies methods of calculating the static load rating and the dynamic load rating for spherical plain bearings within the size ranges shown in ISO 12240-1, ISO 12240-2 and ISO 12240-3.

Rod ends according to ISO 12240-4 are excluded.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 6811, *Spherical plain bearings — Vocabulary*

ISO 12240-1, *Spherical plain bearings — Part 1: Radial spherical plain bearings*

ISO 12240-2, *Spherical plain bearings — Part 2: Angular contact radial spherical plain bearings*

ISO 12240-3, *Spherical plain bearings — Part 3: Thrust spherical plain bearings*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12240-1, ISO 12240-2, ISO 12240-3 and ISO 6811 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1 Static conditions

3.1.1

static load rating

<spherical plain bearings> maximum load that the spherical plain bearing can accommodate at room temperature without inadmissible deforming or damage of the sliding surfaces, when there is no relative movement between the sliding contact surfaces

3.1.2

static radial load rating

C_{0r}

static load rating (3.1.1) when a load is applied on the spherical plain bearing in pure radial direction

3.1.3

static axial load rating

C_{0a}

static load rating (3.1.1) when a load is applied on the spherical plain bearing in pure axial direction