

Metric spherical plain bearings —

Part 6: Glossary of terms

[ISO title: Spherical plain bearings — Vocabulary]

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Mechanical Engineering Standards Committee (MEE/-) to Technical Committee MEE/30 upon which the following bodies were represented:

- Ball and Roller Bearing Manufacturers' Association
- Engineering Equipment and Materials Users' Association
- Institution of Mechanical Engineers
- Institution of Production Engineers
- Machine Tool Industry Research Association
- Ministry of Defence
- National Coal Board
- North East Coast Institution of Engineers and Shipbuilders
- Society of British Aerospace Companies Limited

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National foreword

This British Standard has been prepared under the direction of the Mechanical Engineering Standards Committee and is one of a series on metric spherical plain bearings implementing corresponding International Standards in the development of which the United Kingdom has played an active part.

This Part of this British Standard is identical with ISO 6811:1983 “*Spherical plain bearings — Vocabulary*” prepared by Technical Committee ISO/TC 4, Rolling bearings, of the International Organization for Standardization (ISO).

Terminology and conventions. The text of the International Standard has been approved as suitable for publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is drawn especially to the following.

Wherever the words “International Standard” appear, referring to this standard, they should be read as “British Standard”.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 12 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope and field of application

This International Standard presents general terms and definitions relevant to the field of spherical plain bearings. It deals with bearings, bearing parts and features, movements, angles and rod ends.

2 Principles and rules followed

2.1 Constitution of the vocabulary

The vocabulary comprises

- a) terms with their definition, in systematic order (see clause 3);
- b) figures with index numbers of relevant terms (see clause 4);
- c) alphabetical listings of the terms, with their index numbers (see the index).

2.2 Constitution of clause 3 on terms and definitions

The terms and definitions are given in groups and sub-groups, arranged in systematic order.

A two-digit serial number is assigned to each group. Each sub-group is assigned a four-digit serial number, of which the first two digits are those of the group. Each entry (a term with its definition) is assigned a six-digit index number, the first four digits being those of the sub-group.

A term printed in *italic typeface* in a definition is defined in another entry in this International Standard. It is only printed in italic typeface the first time it occurs in each entry. The basic form of each such term is included in the alphabetical index, where the index number of the corresponding entry is shown.

2.3 Constitution of clause 4 on figures

Each figure gives the index numbers of relevant terms. A figure usually shows only one example of the several existing forms of a bearing or part. In most cases the figures are simplified, and leave out unnecessary details.

2.4 Constitution of the alphabetical index

The alphabetical index includes all terms given and defined in clause 3. Multiple-word terms appear in alphabetical order both by natural order of words and by their key words.

The alphabetical index refers to the index number of the entry in clause 3 where the term is defined.

3 Terms and definitions

01 Bearings

01.01 General terms

01.01.01

spherical plain bearing

a plain bearing in which the *sliding contact surface* is spherical (Figure 1 to Figure 9, Figure 12 to Figure 16)

01.01.02

spherical plain radial bearing

a *spherical plain bearing* intended to support primarily radial load (Figure 1, Figure 2, Figure 3, Figure 6, Figure 7, Figure 9, Figure 12 to Figure 16)

01.01.03

radial contact spherical plain radial bearing

a *spherical plain radial bearing* having a *nominal contact angle* of 0° (Figure 1, Figure 6, Figure 9, Figure 12 to Figure 16)

01.01.04

angular contact spherical plain radial bearing

a *spherical plain radial bearing* having a *nominal contact angle* larger than 0° up to and including 45° (Figure 2, Figure 3)

01.01.05

spherical plain thrust bearing

a *spherical plain bearing* intended to support primarily axial load (Figure 4, Figure 5, Figure 8)

01.01.06

axial contact spherical plain thrust bearing

a *spherical plain thrust bearing* having a *nominal contact angle* of 90° (Figure 4)

01.01.07

angular contact spherical plain thrust bearing

a *spherical plain thrust bearing* having a *nominal contact angle* larger than 45° and less than 90° (Figure 5, Figure 8)

01.02 Other terms

01.02.01

spherical plain bearing, joint type

a *spherical plain bearing* designed primarily for *oscillatory, tilting* and *slow rotational movements*

01.02.02

spherical plain bearing with ball stud

a *spherical plain bearing, joint type*, in which a *ball stud* is mounted in place of an *inner ring* or *shaft washer*

02 Bearing parts and features

02.01 General terms

02.01.01

bearing bore

the inside surface of an *inner ring* or *shaft washer* of a *spherical plain bearing* (Figure 6, Figure 7)

02.01.02

bearing outside surface

the outside surface of an *outer ring* or *housing washer* of a *spherical plain bearing* (Figure 6, Figure 7)

02.01.03

sphered outer surface

the surface of an *inner ring* or *shaft washer* intended to make sliding contact with the *outer ring*, *housing washer* or *rod end eye* and having a convex surface being part of a sphere (Figure 6, Figure 8)

02.01.04

sphered inner surface

the surface of an *outer ring*, *housing washer* or *rod end eye* intended to make sliding contact with the *inner ring* or *shaft washer* and having a concave surface being part of a hollow sphere (Figure 6, Figure 8)

02.01.05

sliding contact surface

the parts of the *sphered outer surface* and *sphered inner surface* which are in contact (Figure 6, Figure 8)

02.01.06

face

that surface of a *ring*, *washer* or *rod end eye* which is nominally perpendicular to the axis of the ring, washer or eye

02.01.07

back face

that *face* of an *angular contact spherical plain radial bearing* or of a *spherical plain thrust bearing* which is intended to support axial loads (Figure 7, Figure 8)

02.01.08

front face

that *face* of an *angular contact spherical plain radial bearing* or of a *spherical plain thrust bearing* which is opposite to the *back face* and not intended to support axial load (Figure 7, Figure 8)

02.01.09

chamfer

a surface joining the *bearing bore* and one of the *faces* of the *inner ring* or *shaft washer* or the *bearing outside surface* and one of the *faces* of the *outer ring* or *housing washer* (Figure 7, Figure 8)

02.01.10

lubrication groove

a circumferential groove in the bore of the *inner ring* or in the outside surface of an *outer ring* intended for conveying lubricant (Figure 13)

02.01.11

filling slots

a pair of slots, diametrically opposite in a *face* of an *outer ring* or *rod end eye* to permit the insertion of an *inner ring* (Figure 12)

02.01.12

lubrication hole

a radial hole connecting a *lubrication groove* to the *sliding contact surface* or to a *distribution groove* (Figure 13)

02.01.13

distribution groove

a groove in a *sliding contact surface* intended to distribute lubricant around or across the surface (Figure 13)

02.01.14

dirt trap groove

a circumferential groove in the *sphered inner* or *outer surface* adjacent and parallel to the *faces*, intended to prevent the entry of foreign matter (Figure 9)

02.01.15

face groove

a circumferential groove in a *face* of the *outer ring* to facilitate the retention of the outer ring in a housing (Figure 13)

02.01.16

retaining ring groove(s)

groove(s) in the outside surface of a *double-fractured (cut) outer ring* or *two-piece outer ring* intended to accommodate ring(s) to hold the halves of the outer ring together (Figure 14, Figure 15)

02.02 Rings

02.02.01

inner ring

that part of a *spherical plain radial bearing* which has a *sphered outer surface* (Figure 6, Figure 7)