

American National Standard

Rolling Bearing — Spherical Plain Bearings Part 1: Spherical Plain Bearings Rod Ends

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Spherical plain bearings — **Part 4:** **Spherical plain bearing rod ends**

Rotules lisses —

Partie 4: Embouts à rotule



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standard 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 12240-4 was prepared by Technical Committee ISO/TC 4, *Rolling bearings*, Subcommittee SC 7, *Spherical plain bearings*.

This first edition cancels and replaces ISO 6126:1987 of which it constitutes a technical revision.

ISO 12240 consists of the following parts, under the general title *Spherical plain bearings*:

- *Part 1: Radial spherical plain bearings;*
- *Part 2: Angular contact radial spherical plain bearings;*
- *Part 3: Thrust spherical plain bearings;*
- *Part 4: Spherical plain bearing rod ends.*

Descriptors: Bearings, plain bearings, spherical bearings, end pieces, form specifications, dimensions, dimensional tolerances, clearances.

1 Scope

This part of ISO 12240 specifies dimensions, tolerances and radial internal clearances for various dimension series of spherical plain bearing rod ends.

The dimensions and tolerances specified in this part of ISO 12240 have been selected to permit the design and use of spherical plain bearing rod ends which incorporate radial spherical plain bearings having various sliding material combinations.

The specified tolerance values apply for finished spherical plain bearing rod ends before any coating, plating, ring splitting or fracturing.

Spherical plain bearing rod ends need not conform to the designs illustrated but compliance is required as regards dimensions, tolerances and radial internal clearances specified.

NOTE Spherical plain bearing rod ends for airframe applications and specific spherical plain bearing rod ends for direct connection to hydraulic cylinders are not covered by this part of ISO 12240.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 12240. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 12240 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 582:1995, *Rolling bearings — Chamfer dimensions — Maximum values*.

ISO 965-1:1992, *ISO general purpose metric screw threads — Tolerances — Part 1: Principles and basic data*.

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

ISO 6811:1998, *Spherical plain bearings — Vocabulary*.

ISO 12240-1:1998, *Spherical plain bearings — Part 1: Radial spherical plain bearings*.

3 Definitions and symbols

For the purposes of this part of ISO 12240, the definitions given in ISO 1132-1 and ISO 6811 apply. The symbols (except those for tolerances) shown in the figures and the values given in the tables denote nominal dimensions unless specified otherwise.

B	Inner ring width
C	Outer ring width
C_1	Width of rod end eye
D	Outside diameter of bearing outer ring
d	Bore diameter of inner ring
d_1	Outside diameter of inner ring face
d_2	Outside diameter of rod end eye
d_3	Rod end shank diameter
d_4	Rod end shank shoulder diameter
d_5	Rod end shank diameter with welding end
d_6	Centre pin diameter
d_k	Sphere diameter
G	Diameter of thread
h, h_1, h_2	Centre height of rod end
l_1, l_3	Thread length
l_2, l_4, l_6	Overall length of rod end
l_5	Length of shoulder on rod end shank
l_7	Length of the flat surface from the bearing bore centre to the shank

¹⁾ To be published. (Revision of ISO 1132:1980)