



ANSI/ABMA/ISO 14191:1997

AMERICAN NATIONAL STANDARD

ABMA Standard

ISO Standard

Aerospace – Airframe spherical roller bearings, single-row, self-aligning, diameter series 3 and 4 – Metric series

Secretariat
American Bearing Manufacturers Association

Approved July 20, 1999



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diameter series 3 and 4 –
Metric series

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American National Standards Institute, Inc.

FOREWORD

(This foreword is not part of ANSI/ABMA/ISO 14191:1997.)

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been authorized 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.

Draft International Standards adopted by the technical committee are circulated to member bodies for voting. Publication as an International Standard requires approval of at least 75% of the member bodies casting a vote.

International Standard 14191 was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee 15, *Airframe bearings*.

This standard was processed and approved for submittal to ANSI by Accredited Standards Committee B3 on Ball and Roller Bearings. Committee approval of this standard does not necessarily imply that all committee members voted for its approval.

Suggestions for the improvement of this standard gained through experience with its use will be welcomed. These should be sent to: American Bearing Manufacturers Association Secretariat, ANSI ASC B3, 1200 19th Street, NW, Suite 300, Washington DC 20036-2422.

Aerospace — Airframe spherical roller bearings, single-row, self-aligning, diameter series 3 and 4 — Metric series

1 Scope

This International Standard specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible loads of metric series single-row, self-aligning spherical roller bearings of diameter series 3 and 4, in accordance with ISO 15, used in airframe applications. These bearings are designed to withstand only slow rotations and oscillations under load and are intended for use between fixed and moving parts of an aircraft structure and their control surfaces.

The airframe roller bearings covered by this International Standard are designed to operate in the temperature range of $-54\text{ }^{\circ}\text{C}$ to $+150\text{ }^{\circ}\text{C}$.

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 15:1998, *Rolling bearings — Radial bearings — Boundary dimensions, general plan.*

ISO 683-17:—¹⁾, *Heat-treated steels, alloy steels and free-cutting steels — Part 17: Ball and roller bearing steels.*

ISO 1132:1980, *Rolling bearings — Tolerances — Definitions.*

ISO 2082:1986, *Metallic coatings — Electroplated coatings of cadmium on iron or steel.*

ISO 4520:1981, *Chromate conversion coatings on electroplated zinc and cadmium coatings.*

ISO 5593:1997, *Rolling bearings — Vocabulary.*

ISO 8075:1985, *Aerospace — Surface treatment of hardenable stainless steel parts.*

ISO 14190:1998, *Aerospace — Airframe rolling bearings: ball and spherical roller bearings — Technical specification.*

AMS 2417E:1993, *Plating, zinc-nickel alloy.*²⁾

¹⁾ To be published. (Revision of ISO 683-17:1976)

²⁾ Available from: SAE International
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Warrendale, PA 15096-0001
USA