INTERNATIONAL STANDARD

ISO 3290-1

Second edition
2014-09-01

Rolling bearings — Balls —

Part 1: Steel balls

Roulements — Billes —

Partie 1: Billes de roulement en acier

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Reference number
ISO 3290-1:2014(E)

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Published in Switzerland

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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 (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 (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 meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword – Supplementary information.

The committee responsible for this document is ISO/TC 4, *Rolling bearings*, Subcommittee SC 12, *Ball bearings*.

This second edition cancels and replaces the first edition (ISO 3290-1:2008), which has been technically revised. It also incorporates Technical Corrigendum ISO 3290-1:2008/Cor.1:2009. In particular, "material", specified in Clause 6 of the first edition, has been deleted.

ISO 3290 consists of the following parts, under the general title *Rolling bearings — Balls*:

— *Part 1: Steel balls*

— *Part 2: Ceramic balls*

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Rolling bearings — Balls —

Part 1: Steel balls

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1 Scope

This part of ISO 3290 specifies requirements for finished steel balls for rolling bearings.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

ISO 4288, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Rules and procedures for the assessment of surface texture*

ISO 5593, *Rolling bearings — Vocabulary*

ISO 12181-1, *Geometrical product specifications (GPS) — Roundness — Part 1: Vocabulary and parameters of roundness*

ISO 15241, *Rolling bearings — Symbols for physical quantities*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1132-1, ISO 5593, and the following apply.

3.1
ball gauge
amount by which the mean diameter of ball lot should differ from the nominal ball diameter, this amount being one of an established series

Note 1 to entry: Each ball gauge is a whole multiple of the ball gauge interval established for the ball grade in question.

Note 2 to entry: A ball gauge, in combination with the ball grade and nominal diameter, is considered as the most exact ball size specification to be used by a customer for ordering purposes.

[SOURCE: ISO 5593:1997, 05.04.09, modified — Notes 1 and 2 to entry have been added.]

3.2
ball gauge interval
absolute difference of two consecutive ball gauges

3.3
ball grade
specific combination of dimensional, form, surface roughness and sorting tolerances for balls

Note 1 to entry: Ball grade is identified by the letter G and a number, e.g. G 20.

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