
**Rolling bearings — Tapered roller
bearings — Boundary dimensions and
series designations**

*Roulements — Roulements à rouleaux coniques — Dimensions
d'encombrement et désignation des séries*

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

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Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols	1
5 Series designations	4
6 Boundary dimensions	5
6.1 General	5
6.2 Single-row tapered roller bearings	5
6.3 Double-row or matched pair of tapered roller bearings	22
6.4 Single-row tapered roller bearings with flanged outer rings	30
Annex A (informative) Flange dimensions for additional outer ring sizes	39
Bibliography	41

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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 (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).

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For an explanation of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 4, *Rolling bearings*, Subcommittee SC 9, *Tapered roller bearings*.

This third edition cancels and replaces the second edition (ISO 355:2007), which has been technically revised. It also incorporates the Amendment ISO 355:2007/Amd.1:2012. The main changes compared to the previous edition are as follows:

- Contact angle and smallest single chamfer dimension of the inner ring back face added to the double-row bearing tables.
- Tables with all dimensions added for bearings with flanged outer rings.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Rolling bearings — Tapered roller bearings — Boundary dimensions and series designations

1 Scope

This document specifies bearing and subunit boundary dimensions for complete single-row and double-row tapered roller bearings. It also specifies the flange dimensions of flanged outer rings for a selection of these bearings. A series designation for each bearing is also specified.

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 492, *Rolling bearings — Radial bearings — Geometrical product specifications (GPS) and tolerance values*

ISO 582, *Rolling bearings — Chamfer dimensions — Maximum values*

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

ISO 5593, *Rolling bearings — Vocabulary*

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 and ISO 5593 apply.

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

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

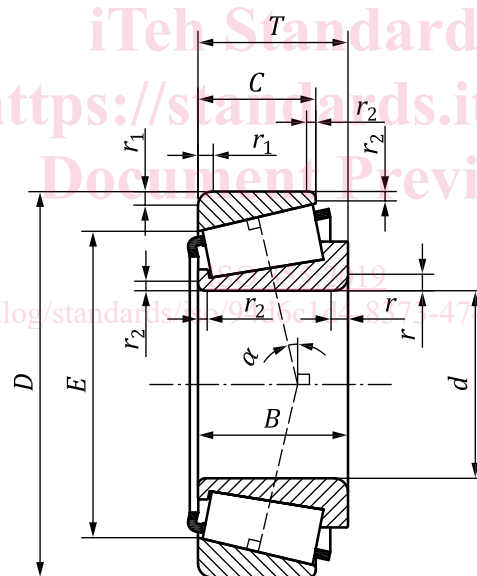
4 Symbols

For the purposes of this document, the symbols given in ISO 15241 and the following apply.

The symbols shown in [Figures 1 to 4](#) and the values given in [Tables 4 to 16](#) denote nominal dimensions unless specified otherwise.

B	inner ring width, single-row bearing
B_1	overall width of inner rings of double-row tapered roller bearing or matched pair of tapered roller bearings with spacer
C	outer ring width, single-row bearing
C_1	width of outer ring flange
C_2	width of double outer ring, or overall width of outer rings of matched pair of tapered roller bearings with spacers

D	outside diameter of outer ring
D_1	outside diameter of outer ring flange
d	bore diameter of inner ring
E	inside diameter of outer ring back face
h_1	height of outer ring flange
r	chamfer dimension of inner ring back face
$r_{s\ min}$	smallest single chamfer dimension of inner ring back face
r_1	chamfer dimension of outer ring back face
$r_{1s\ min}$	smallest single chamfer dimension of outer ring back face
r_2	chamfer dimension of inner ring and outer ring front face
T	bearing width, single-row bearing
α	contact angle



NOTE In the case of tapered roller bearings, the contact angle is the same as the half included outer ring raceway angle.

Figure 1 — Single-row tapered roller bearing