

BS ISO 12044:2014



BSI Standards Publication

Rolling bearings — Single-row angular contact ball bearings — Chamfer dimensions for outer ring non-thrust side

bsi.

...making excellence a habit.™

National foreword

This British Standard is the UK implementation of ISO 12044:2014. It supersedes BS ISO 12044:1995 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee MCE/7, Rolling bearings.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2014.
Published by BSI Standards Limited 2014

ISBN 978 0 580 77274 0

ICS 21.100.20

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 May 2014.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

**Rolling bearings — Single-row angular
contact ball bearings — Chamfer
dimensions for outer ring non-thrust
side**

*Roulements — Roulements à billes à contact oblique à une rangée —
Dimensions des arrondis des bagues côté non chargé*





COPYRIGHT PROTECTED DOCUMENT

© ISO 2014

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

	Page
Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols	1
5 Chamfer dimensions	2
Bibliography	4

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).

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 12044:1995), which has been technically revised.

Rolling bearings — Single-row angular contact ball bearings — Chamfer dimensions for outer ring non-thrust side

1 Scope

This International Standard specifies chamfer dimensions for outer ring, non-thrust side of single-row angular contact ball bearings, where the dimensions differ from those specified in ISO 15. It is applicable to bearings in the diameter series 9, 0, and 2 for contact angles, up to and including 30°, and in the diameter series 2 and 3 for contact angles over 30°.

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 5593, *Rolling bearings — Vocabulary*

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

3 Terms and definitions

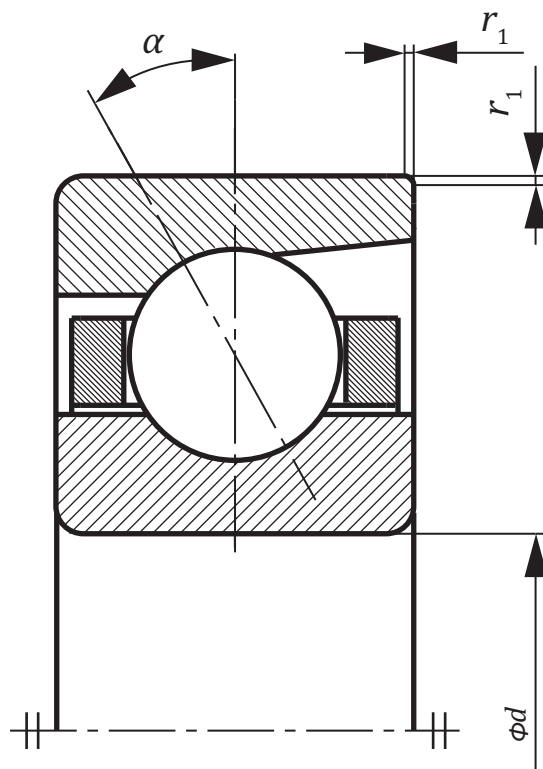
For the purposes of this document, the terms and definitions given in ISO 5593 apply.

4 Symbols

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

The symbols shown in [Figure 1](#) and the values given in [Table 1](#) denote nominal dimensions, unless specified otherwise.

d	bearing bore diameter
r_1	chamfer dimension of outer ring non-thrust side
$r_{1s \min}$	smallest single chamfer dimension of outer ring non-thrust side
α	contact angle



NOTE 1 For tandem mounting, check that there is sufficient contact area between the mating ring faces.

NOTE 2 The figure shows an example of design.

Figure 1 — Chamfer dimension for outer ring non-thrust side of single-row angular contact ball bearing

5 Chamfer dimensions

The chamfer dimensions for outer ring non-thrust side of single-row angular contact ball bearings are given in [Table 1](#).

Chamfer dimension, r_1 , applies at the corner indicated in [Figure 1](#) and specified with $r_{1s \min}$ in [Table 1](#). See ISO 582[2] for the corresponding largest single chamfer dimensions to the $r_{1s \min}$ in [Table 1](#).

Table 1 — Chamfer dimensions

Dimensions in millimetres

d	$r_{1s \min}$				
	Diameter series			Diameter series	
	9	0	2	2	3
$\alpha \leq 30^\circ$			$\alpha > 30^\circ$		
8	0,1	0,1	0,15	0,15	0,15
9	0,1	0,1	0,15	0,15	0,3
10	0,1	0,1	0,3	0,3	0,3
12	0,1	0,1	0,3	0,3	0,6
15	0,1	0,1	0,3	0,3	0,6

Table 1 (continued)

<i>d</i>	<i>r</i> _{1s min}				
	Diameter series			Diameter series	
	9	0	2	2	3
	$\alpha \leq 30^\circ$			$\alpha > 30^\circ$	
17	0,1	0,1	0,3	0,6	0,6
20	0,15	0,3	0,3	0,6	0,6
25	0,15	0,3	0,3	0,6	0,6
30	0,15	0,3	0,3	0,6	0,6
35	0,15	0,3	0,3	0,6	1
40	0,15	0,3	0,6	0,6	1
45	0,15	0,3	0,6	0,6	1
50	0,15	0,3	0,6	0,6	1
55	0,3	0,6	0,6	1	1
60	0,3	0,6	0,6	1	1,1
65	0,3	0,6	0,6	1	1,1
70	0,3	0,6	0,6	1	1,1
75	0,3	0,6	0,6	1	1,1
80	0,3	0,6	1	1	1,1
85	0,6	0,6	1	1	1,1
90	0,6	0,6	1	1	1,1
95	0,6	0,6	1,1	1,1	1,1
100	0,6	0,6	1,1	1,1	1,1
105	0,6	1	1,1	1,1	1,1
110	0,6	1	1,1	1,1	1,1
120	0,6	1	1,1	1,1	1,1
130	0,6	1	1,1	1,1	1,5
140	0,6	1	1,1	1,1	1,5
150	1	1	1,1	1,1	1,5
160	1	1	1,1	1,1	1,5
170	1	1,1	1,5	1,5	1,5
180	1	1,1	1,5	1,5	2
190	1	1,1	1,5	1,5	2
200	1	1,1	1,5	1,5	2
220	1	1,1	1,5	1,5	2
240	1	1,1	1,5	1,5	2

Bibliography

- [1] ISO 15, *Rolling bearings — Radial bearings — Boundary dimensions, general plan*
- [2] ISO 582, *Rolling bearings — Chamfer dimensions — Maximum values*

British Standards Institution (BSI)

BSI is the national body responsible for preparing British Standards and other standards-related publications, information and services.

BSI is incorporated by Royal Charter. British Standards and other standardization products are published by BSI Standards Limited.

About us

We bring together business, industry, government, consumers, innovators and others to shape their combined experience and expertise into standards-based solutions.

The knowledge embodied in our standards has been carefully assembled in a dependable format and refined through our open consultation process. Organizations of all sizes and across all sectors choose standards to help them achieve their goals.

Information on standards

We can provide you with the knowledge that your organization needs to succeed. Find out more about British Standards by visiting our website at bsigroup.com/standards or contacting our Customer Services team or Knowledge Centre.

Buying standards

You can buy and download PDF versions of BSI publications, including British and adopted European and international standards, through our website at bsigroup.com/shop, where hard copies can also be purchased.

If you need international and foreign standards from other Standards Development Organizations, hard copies can be ordered from our Customer Services team.

Subscriptions

Our range of subscription services are designed to make using standards easier for you. For further information on our subscription products go to bsigroup.com/subscriptions.

With **British Standards Online (BSOL)** you'll have instant access to over 55,000 British and adopted European and international standards from your desktop. It's available 24/7 and is refreshed daily so you'll always be up to date.

You can keep in touch with standards developments and receive substantial discounts on the purchase price of standards, both in single copy and subscription format, by becoming a **BSI Subscribing Member**.

PLUS is an updating service exclusive to BSI Subscribing Members. You will automatically receive the latest hard copy of your standards when they're revised or replaced.

To find out more about becoming a BSI Subscribing Member and the benefits of membership, please visit bsigroup.com/shop.

With a **Multi-User Network Licence (MUNL)** you are able to host standards publications on your intranet. Licences can cover as few or as many users as you wish. With updates supplied as soon as they're available, you can be sure your documentation is current. For further information, email bsmusales@bsigroup.com.

BSI Group Headquarters

389 Chiswick High Road London W4 4AL UK

Revisions

Our British Standards and other publications are updated by amendment or revision.

We continually improve the quality of our products and services to benefit your business. If you find an inaccuracy or ambiguity within a British Standard or other BSI publication please inform the Knowledge Centre.

Copyright

All the data, software and documentation set out in all British Standards and other BSI publications are the property of and copyrighted by BSI, or some person or entity that owns copyright in the information used (such as the international standardization bodies) and has formally licensed such information to BSI for commercial publication and use. Except as permitted under the Copyright, Designs and Patents Act 1988 no extract may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, photocopying, recording or otherwise – without prior written permission from BSI. Details and advice can be obtained from the Copyright & Licensing Department.

Useful Contacts:

Customer Services

Tel: +44 845 086 9001

Email (orders): orders@bsigroup.com

Email (enquiries): cservices@bsigroup.com

Subscriptions

Tel: +44 845 086 9001

Email: subscriptions@bsigroup.com

Knowledge Centre

Tel: +44 20 8996 7004

Email: knowledgecentre@bsigroup.com

Copyright & Licensing

Tel: +44 20 8996 7070

Email: copyright@bsigroup.com



...making excellence a habit.™