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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

Reference number
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Foreword

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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).

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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.[1] 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.

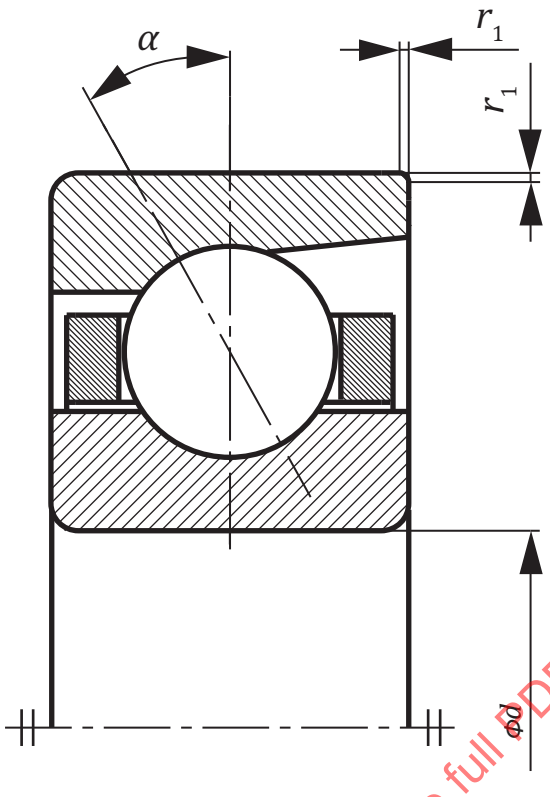
The symbols shown in Figure 1 and the values given in Table 1 denote nominal dimensions, unless specified otherwise.

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
	$\alpha \leq 30°$			$\alpha > 30°$	
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)*

d	$r_{1s\ min}$				
	Diameter series			Diameter series	
	9	0	2	2	3
	$\alpha \leq 30°$			$\alpha > 30°$	
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*

