

Rolling bearings — Insert bearings and eccentric locking collars — Boundary dimensions and tolerances

ICS 21.100.20

National foreword

This British Standard is the UK implementation of ISO 9628:2006+A1:2011, incorporating corrigendum February 2007. It supersedes BS ISO 9628:2006 which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to ISO text carry the number of the ISO amendment. For example, text altered by ISO amendment 1 is indicated by A1 A1.

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.

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 28 April 2006

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ISBN 978 0 580 66203 4

Amendments/corrigenda issued since publication

Amd. No.	Date	Comments
17125 Corrigendum No. 1	31 May 2007	Implementation of corrected text
	31 May 2011	Implementation of ISO amendment 1:2011

INTERNATIONAL STANDARD

ISO
9628

Second edition
2006-04-01

Corrected version
2007-02-01

Rolling bearings — Insert bearings and eccentric locking collars — Boundary dimensions and tolerances

*Roulements — Roulements «insert» et bagues de blocage
excentriques — Dimensions d'encombrement et tolérances*



Reference number
ISO 9628:2006(E)

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Foreword

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

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.

ISO 9628 was prepared by Technical Committee ISO/TC 4, *Rolling bearings*, Subcommittee SC 6, *Insert bearings and accessories*.

This second edition cancels and replaces the first edition (ISO 9628:1992), which has been technically revised.

This corrected version incorporates the following corrections:

- on page 3, in Figure 2, the symbol " B_1 " has been replaced by " B " and the figure itself corrected;
- on page 4, in Figure 3, the symbol " B_1 " has been replaced by " B ";
- on page 5, Figures 5 and 6 have been replaced to correctly present the eccentricity;
- on page 6, in 5.6, the wording has been improved;
- on pages 9 and 10, in Table 2, " B_1 " has been replaced by " B ".

Rolling bearings — Insert bearings and eccentric locking collars — Boundary dimensions and tolerances

1 Scope

This International Standard specifies the characteristics, boundary dimensions and tolerances of insert bearings and eccentric locking collars and the radial internal clearances of insert bearings.

2 Normative references

The following referenced documents are indispensable for the application 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 15, *Rolling bearings — Radial bearings — Boundary dimensions, general plan*

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

ISO 5593, *Rolling bearings — Vocabulary*

ISO 15241, *Rolling bearings — Symbols for quantities*

3 Terms and definitions

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

3.1

insert bearing

radial rolling bearing with a spherical outside surface and an extended inner ring with a locking device

NOTE The locking device, used for fixing the inner ring to the shaft, may be an eccentric locking collar or set screws either in a concentric locking collar around the inner ring or directly in the inner ring.

4 Symbols

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

The symbols (except those for tolerances) shown in Figures 1 to 6 and the values given in Tables 1 to 12 denote nominal dimensions unless specified otherwise.

NOTE Figures 1 to 6 are drawn schematically and sealing devices and cages are not shown in Figures 1 to 4.

A	width of eccentric surface of inner ring
A_1	width of eccentric surface of eccentric locking collar
B	width of inner ring

B_1	overall width of inner ring including eccentric locking collar
B_2	width of eccentric locking collar
C	width of outer ring
C_1	distance from centre of outer ring to centre of lubrication zone
C_2	width of lubrication zone
D	outside diameter of bearing
d	bore diameter of bearing and of eccentric locking collar
d_1	outside diameter of eccentric locking collar
d_2	small bore diameter of eccentric surface (at theoretical sharp corner) of eccentric locking collar
d_3	large outside diameter of eccentric surface (at theoretical sharp corner) of inner ring
H	eccentricity of inner ring eccentric extension and of eccentric locking collar
r_1	chamfer dimension of eccentric surface of inner ring
$r_{1s \min}$	smallest single chamfer dimension of eccentric surface of inner ring
r_2	fillet radius of eccentric surface of inner ring
$r_{2s \max}$	largest single fillet radius of eccentric surface of inner ring
r_3	fillet radius of eccentric surface of eccentric locking collar
$r_{3s \max}$	largest single fillet radius of eccentric surface of eccentric locking collar
r_4	chamfer dimension of eccentric surface of eccentric locking collar
$r_{4s \min}$	smallest single chamfer dimension of eccentric surface of eccentric locking collar
S	distance from centre of raceway to face of inner ring on side opposite locking device
S_1	distance from centre of raceway to face of inner ring or eccentric locking collar limiting overall bearing width on locking device side
V_{dsp}	variation of bore diameter of bearing in a single plane
Δ_{A1s}	deviation of a single width of eccentric surface of eccentric locking collar
Δ_{B2s}	deviation of a single width of eccentric locking collar
Δ_{dmp}	deviation of mean bore diameter of bearing in a single plane
Δ_{ds}	deviation of a single bore diameter of eccentric locking collar
Δ_{d2s}	deviation of a single small bore diameter of eccentric surface of eccentric locking collar
Δ_{Hs}	deviation of eccentricity of inner ring eccentric extension and of eccentric locking collar in a single plane

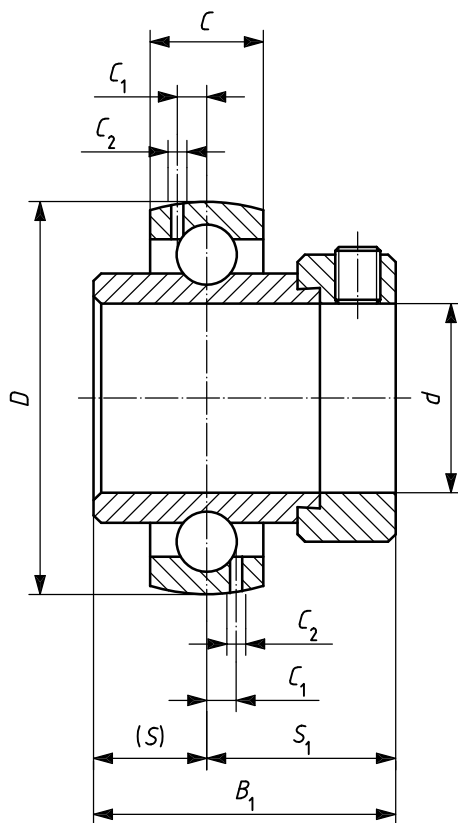


Figure 1 — Bearing with eccentric locking collar — Wide overall width

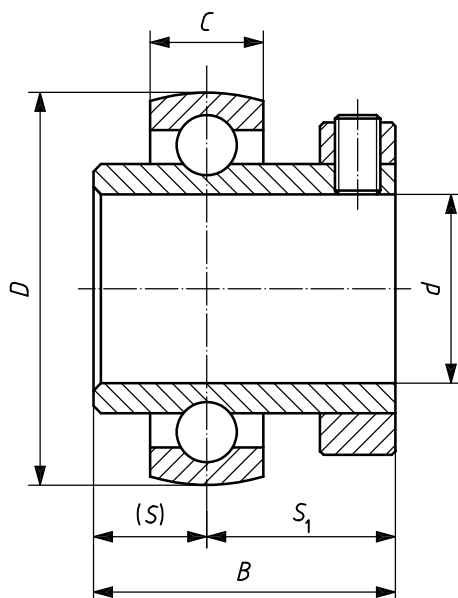


Figure 2 — Bearing with concentric locking collar around the inner ring — Intermediate overall width

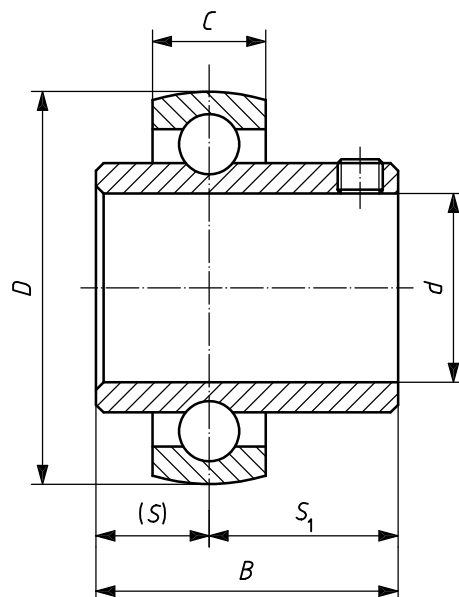


Figure 3 — Bearing with set screws in the inner ring — Intermediate overall width

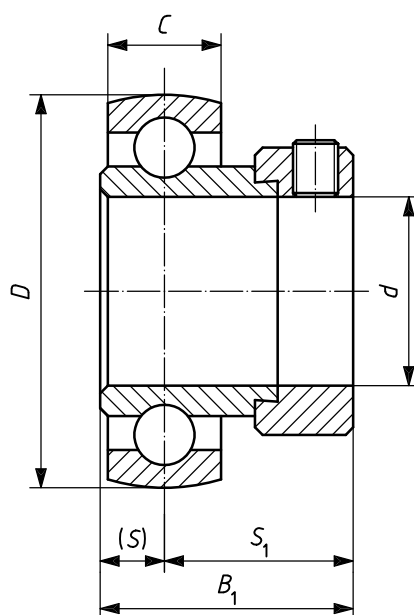


Figure 4 — Bearing with eccentric locking collar — Narrow overall width