



SLOVENSKI STANDARD
SIST ISO 9628:1995

01-november-1995

Kotalni ležaji - Pritrdilni ležaji in ekscentrični pritrdilni obroči

Rolling bearings -- Insert bearings and eccentric locking collars

Roulements -- Roulements "insert" et bagues de blocage excentriques

Ta slovenski standard je istoveten z: ISO 9628:1992

[SIST ISO 9628:1995](#)

<https://standards.iteh.ai/catalog/standards/sist/c6eaa3f3-91e5-49f1-a029-29219bbc7833/sist-iso-9628-1995>

ICS:

21.100.20 Kotalni ležaji Rolling bearings

SIST ISO 9628:1995

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST ISO 9628:1995](#)

<https://standards.iteh.ai/catalog/standards/sist/c6eaa3f3-91e5-49f1-a029-29219bbc7833/sist-iso-9628-1995>

INTERNATIONAL STANDARD

ISO
9628

First edition
1992-12-15

Rolling bearings — Insert bearings and eccentric locking collars

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Roulements — Roulements "insert" et bagues de blocage excentriques

SIST ISO 9628:1995

<https://standards.iteh.ai/catalog/standards/sist/c6eaa3b3-91e5-49f1-a029-29219bbc7833/sist-iso-9628-1995>



Reference number
ISO 9628:1992(E)

ISO 9628:1992(E)

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.

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.

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

This first edition cancels and replaces ISO 2264:1972 and ISO 3145:1974, of which it constitutes a technical revision.

© ISO 1992

All rights reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Rolling bearings — Insert bearings and eccentric locking collars

1 Scope

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

NOTE 1 An insert bearing is defined as a radial rolling bearing with a spherical outside surface and an extended inner ring with a locking device (see ISO 5593). The locking device, for fixing the inner ring to the shaft, may be an eccentric locking collar or set screws either in a concentric collar around the inner ring or directly in the inner ring.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 15:1981, *Rolling bearings — Radial bearings — Boundary dimensions — General plan*.

ISO 5593:1984, *Rolling bearings — Vocabulary*.

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 5593 apply.

4 Symbols

NOTE 2 The symbols (except those for tolerances) shown in the figures and given in the tables denote nominal dimensions unless otherwise specified.

| | |
|-----------------|--|
| A | width of inner ring eccentric surface |
| A_1 | width of collar eccentric surface |
| ΔA_{1s} | deviation of a single collar eccentric surface width of eccentric locking collar |
| B | width of inner ring |
| B_1 | overall inner ring width including eccentric locking collar |
| B_2 | width of eccentric locking collar |
| ΔB_{2s} | deviation of a single collar width of eccentric locking collar |
| C | width of outer ring |
| C_a | distance from centre of outer ring to centre of lubrication zone |
| C_b | width of lubrication zone |
| d | bore diameter of bearing and eccentric locking collar |
| Δd_{mp} | deviation of mean bearing bore diameter in a single plane |
| V_{dp} | variation of bearing bore diameter in a single radial plane |
| Δd_s | deviation of single bore diameter 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 |
| Δd_{2s} | deviation of single small bore diameter of eccentric surface of eccentric locking collar |
| d_3 | large diameter of inner ring eccentric surface (at theoretical sharp corner) |

ISO 9628:1992(E)

| | |
|----------------------|--|
| D | outside diameter of bearing |
| H | eccentricity |
| ΔH_s | eccentricity deviation in a single radial plane |
| r_1 | chamfer dimension of inner ring eccentric surface |
| $r_{1s \text{ min}}$ | smallest single chamfer dimension of inner ring eccentric surface |
| r_2 | fillet radius of inner ring eccentric surface |
| $r_{2s \text{ max}}$ | largest single fillet radius of inner ring eccentric surface |
| r_3 | fillet radius of collar eccentric surface |
| $r_{3s \text{ max}}$ | largest single fillet radius of collar eccentric surface |
| r_4 | chamfer dimension of collar eccentric surface |
| $r_{4s \text{ min}}$ | smallest single chamfer dimension of collar eccentric surface |
| S | distance from centre of raceway to inner ring face on side opposite the locking device |
| S_1 | distance from centre of raceway to the face of inner ring or locking collar limiting the overall bearing width on the locking device side. |

5 Characteristics

5.1 General

The bearings on one shaft are as a rule mounted in two or more separate housings, which are not always perfectly aligned. The outer ring has a spherical outside surface so that the bearing may be mounted in a housing with a matching spherical seating to provide correct initial alignment.

The bore surface may be plated to reduce corrosion during operation.

5.2 Bore diameter

To each bearing and eccentric locking collar size there is related one bore in millimetres and one or several bores in inches. The non-preferred inch bores, which are shown in parentheses in tables 1 to 3, should be avoided wherever possible.

Contrary to general rolling bearing practice, the bore tolerance is on the plus side of the nominal bore diameter, in order that the bearing and collar may be slipped over standard shafting.

5.3 Outside diameter

The outside diameter corresponds (with respect to the metric bore diameter) to the diameter series 2 of ISO 15.

5.4 Inner ring width and locking devices

The inner ring width does not conform to the requirements of ISO 15. It is determined by the requirements of space for sealing and locking devices and by the axial extension of the shaft support considered suitable for various applications.

Where the locking device extends axially beyond the inner ring, the width over the locking device, called the overall width, and the location with respect to the outer ring centreline of the side surface limiting the overall width, are important dimensions and are therefore specified in this International Standard.

Three series of overall widths, designated wide, intermediate and narrow, are given. Each of the figures 1 to 4 shows one example only of locking device design.

NOTE 3 The figures are drawn schematically and sealing devices are not shown.

5.5 Width of outer ring

For bearings with spherical outside surface, the width of the outer ring is not important provided the range of width is known so that assembly slots in the housing may be properly dimensioned. This International Standard therefore gives outer ring widths which range from a minimum that conforms to dimension series 02 in ISO 15 to a maximum that provides sufficient space for various seals and lubrication holes.

5.6 Relubrication

Depending on the application, these bearings are supplied with or without means for relubrication, for example one or several small radial holes drilled through the outer ring. The exact design or location of such means is not specified in this International Standard. It gives only the width and location of a zone which any relubrication means, provided on one or both sides of the outer ring, should intersect in such a way that lubricant will satisfactorily feed into the bearing from the housing bore groove covering the zone.

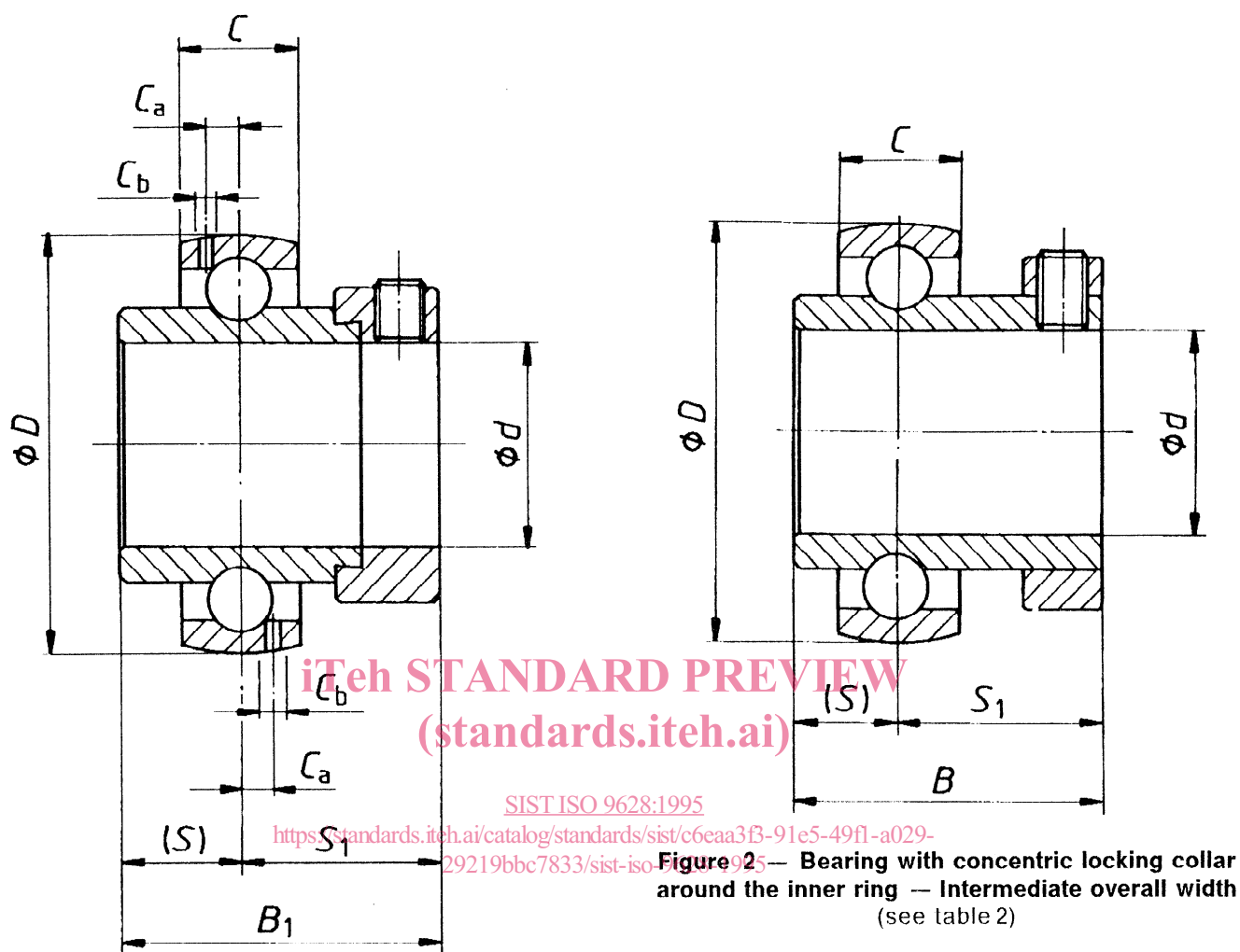


Figure 1 — Bearing with eccentric locking collar — Wide overall width (see table 1)

Figure 2 — Bearing with concentric locking collar around the inner ring — Intermediate overall width (see table 2)

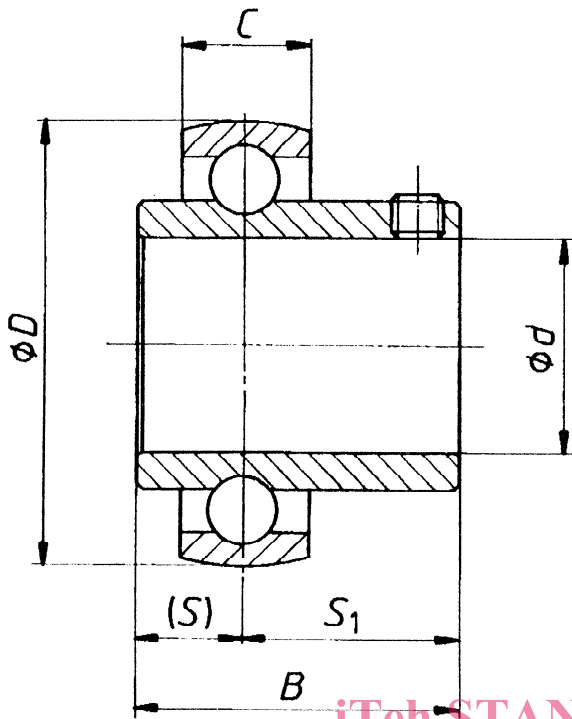


Figure 3 — Bearing with set screws in the inner ring — Intermediate overall width (see table 2)

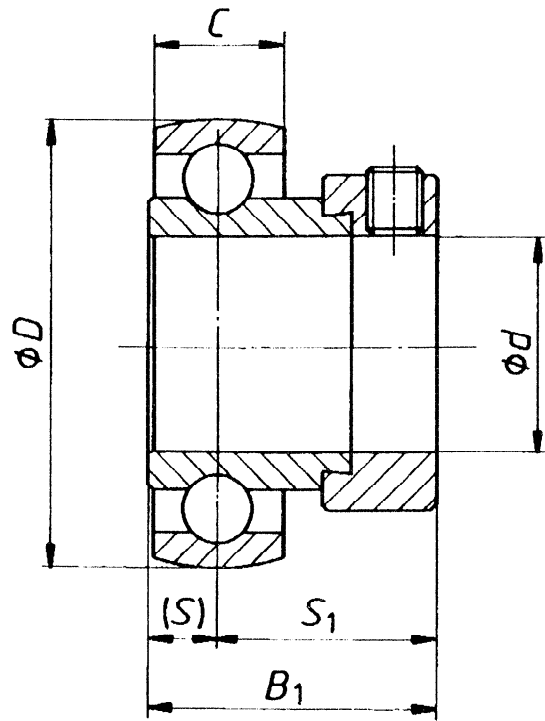


Figure 4 — Bearing with eccentric locking collar — Narrow overall width (see table 3)

STANDARD PREVIEW
(standards.iteh.ai)

SIST ISO 9628:1995

<https://standards.iteh.ai/catalog/standards/sist/c6eaa3b3-91e5-49f1-a029-29219bbc7833/sist-iso-9628-1995>

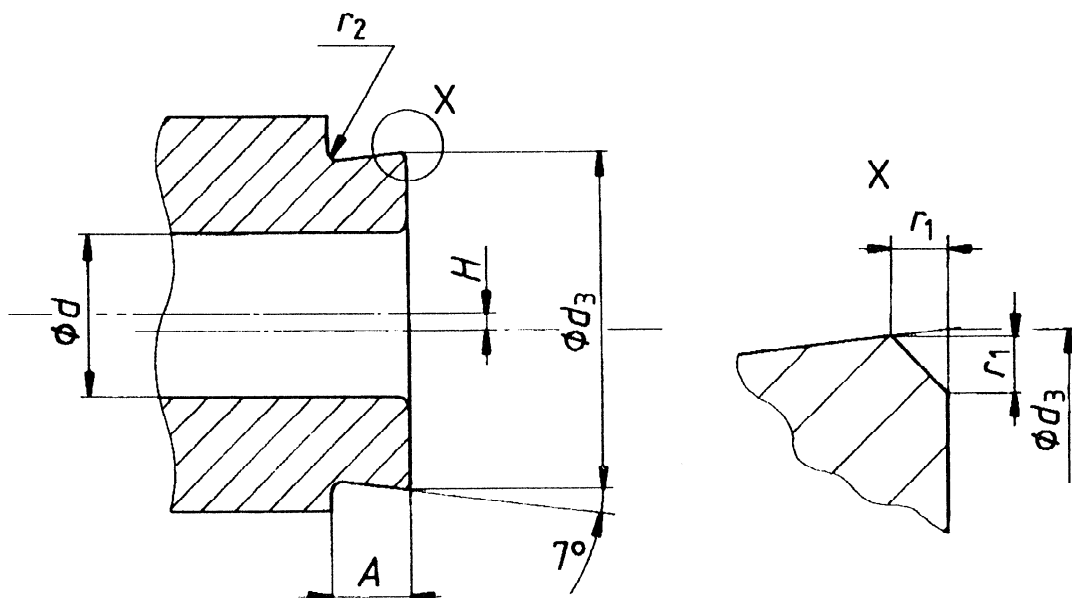
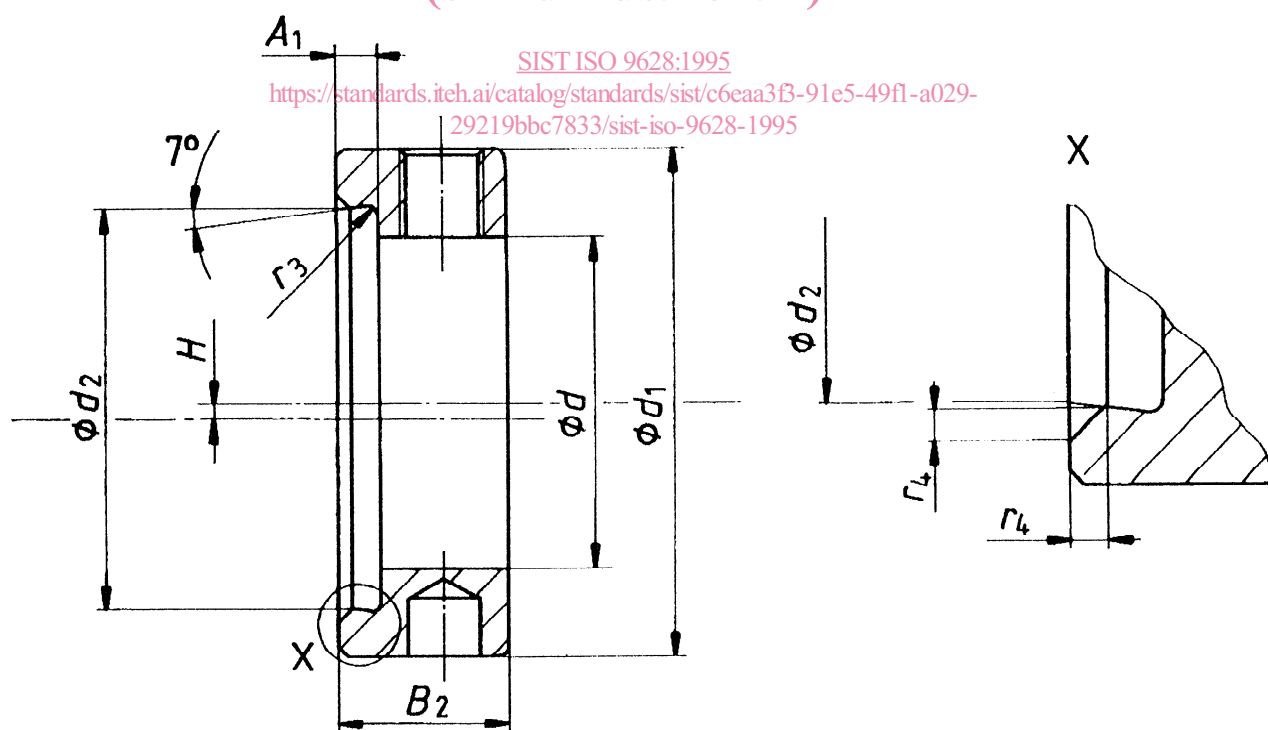


Figure 5 — Inner ring eccentric extension (see table 4)

iTeh STANDARD PREVIEW
(standards.iteh.ai)



NOTE — The relative angular position of the plain and tapped holes to each other and to the eccentricity is optional.

Figure 6 — Eccentric locking collar (see table 5)