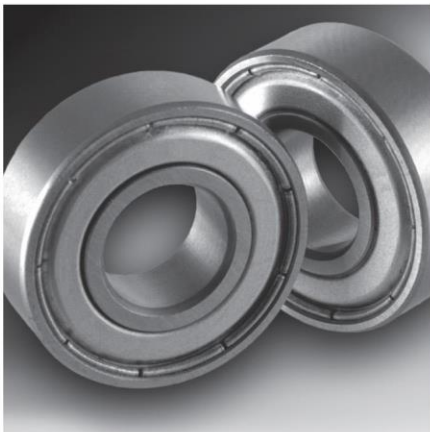




AMERICAN NATIONAL STANDARD

*Accredited Standards
Committee B3*



Shaft and Housing Fits for Metric Radial Ball and Roller Bearings (Except Tapered Roller Bearings) Conforming to Basic Boundary Plan



Secretariat

**American Bearing
Manufacturers Association**

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 **ABMA**
American Bearing Manufacturers Association

ABMA
2025 M Street, NW
Suite 800
Washington, DC 20036
Ph: 202-367-1155
Fax: 202-367-2155
E-mail: info@americanbearings.org
www.americanbearings.org

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**AMERICAN NATIONAL STANDARD
ABMA STANDARD
SHAFT AND HOUSING FITS FOR METRIC RADIAL BALL AND ROLLER BEARINGS
(EXCEPT TAPERED ROLLER BEARINGS)
CONFORMING TO BASIC BOUNDARY PLAN**

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SHAFT AND HOUSING FITS FOR METRIC RADIAL BALL AND ROLLER BEARINGS (EXCEPT TAPERED ROLLER BEARINGS) CONFORMING TO BASIC BOUNDARY PLAN

1. Scope

This standard covers the general selection of shaft and housing fits for metric radial ball and roller bearings of tolerance classes ABEC 1 - RBEC 1 as influenced by the type and extent of bearing loading and other design requirements. Other tolerance classes are not covered by this standard.

Recommendations for the fitting practices of some particular types of ball and roller bearings are covered in other ANSI/ABMA standards. These include:

ANSI/ABMA Std. No.	
12.1 & 12.2	Instrument Ball Bearings
16.1 & 16.2	Airframe Ball, Roller, and Needle Roller Bearings
18.1 & 18.2	Needle Roller Bearings
19.1 & 19.2	Tapered Roller Bearings
26.2	Thin Section Ball Bearings

This standard can also be used as a guide for determining shaft and housing dimensions for inch design ball and roller bearings by using the recommended shaft and housing fits for metric bearings and applying the appropriate bore and O.D. tolerances for the inch design bearings, except those bearings covered by ANSI/ABMA Standard 15.

2. Conformity with Other ANSI Standards

In the size range 0-2500 mm, the deviations used in this standard for shaft and housing seats conform to American National Standard ANSI B4.2, "Preferred Metric Limits and Fits".

3. Description of Shaft and Housing Tolerance Classifications

In the size range described in 2 above, the tolerance classifications are designated by a letter and a numeral. A lower case letter is used for shafts and a capital letter is used for housings. Numerals indicate the degree of accuracy - the smaller numerals representing closer tolerances than the larger. The letters indicate the location of the shaft and housing limits relative to the inner ring bore and outer ring outside diameter tolerance ranges indicated in Figures 1 and 2 by the symbols KB and hB respectively.

Figures 1 and 2 show graphically how the various tolerance classifications result in clearance or interference depending upon how the diameters of the mating parts interact in specific cases.