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AMERICAN NATIONAL STANDARD
ABMA STANDARD

HOUSINGS FOR BEARINGS WITH SPHERICAL OUTSIDE SURFACES

Sponsored by

American Bearing Manufacturers Association, Inc.

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American National Standards Institute, Inc.

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FOREWORD

(This foreword is not part of ANSI/ABMA Standard 14, Housings for Bearings with Spherical Outside Surfaces.)

This American National Standard establishes boundary dimensions and other dimensions, and tolerance values for those dimensions, for pillow block housings, flanged housings and take-up units for use with ball bearings with spherical outside surfaces. Standards for insert bearings designed for use with these housings can be found in ANSI/ABMA Standard 15, *Ball Bearings with Spherical Outside Surfaces and Extended Inner Ring Width (Includes Eccentric Locking Collars)*.

The dimensions in this standard generally conform to International Standard ISO 3228 : 1993, *Rolling bearings - Cast and pressed housings for insert bearings*, except where noted.

Copies of ISO standards concerning rolling element (anti-friction) bearings are available from the American National Standards Institute.

Suggestions for the improvement of this standard gained through experience with its use will be welcomed. These should be sent to the American National Standards Institute, Inc., 11 West 42nd Street, 13th Floor, New York, NY 10036.

The officers of Accredited Standards Committee B3 operating under the American National Standards Institute procedures and the organizations represented at the time this standard was submitted are as follows:

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Hydraulic Institute
The Association for Manufacturing Technology
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ABMA (formerly AFBMA) Standards
for
Ball and Roller Bearings

1 - Terminology for Anti-Friction Ball and Roller Bearings and Parts
4 - Tolerance Definitions and Gauging Practices for Ball and Roller Bearings
7 - Shaft and Housing Fits for Metric Radial Ball and Roller Bearings (Except Tapered Roller Bearings) Conforming to Basic Boundary Plans
8.1 - Mounting Accessories, Metric Design
8.2 - Mounting Accessories, Inch Design
9 - Load Ratings and Fatigue Life for Ball Bearings
10 - Metal Balls
11 - Load Ratings and Fatigue Life for Roller Bearings
12.1 - Instrument Ball Bearings, Metric Design
12.2 - Instrument Ball Bearings, Inch Design
13 - Rolling Bearing Vibration and Noise (Methods of Measuring)
14 - Housings for Bearings with Spherical Outside Surfaces
15 - Ball Bearings with Spherical Outside Surfaces and Extended Inner Ring Width (Includes Eccentric Locking Collars)
16.1 - Airframe Ball, Roller, and Needle Roller Bearings, Metric Design
16.2 - Airframe Ball, Roller, and Needle Roller Bearings, Inch Design
17 - Needle Rollers, Metric Design
18.1 - Needle Roller Bearings, Radial, Metric Design
18.2 - Needle Roller Bearings, Radial, Inch Design
19.1 - Tapered Roller Bearings, Radial, Metric Design
19.2 - Tapered Roller Bearings, Radial, Inch Design
20 - Radial Bearings of Ball, Cylindrical Roller and Spherical Roller Types, Metric Design
21.1 - Thrust Needle Roller and Cage Assemblies and Thrust Washers, Metric Design
21.2 - Thrust Needle Roller and Cage Assemblies and Thrust Washers, Inch Design
22.1 - Spherical Plain Radial Bearings, Joint Type - Metric Design
22.2 - Spherical Plain Radial Bearings, Joint Type - Inch Design
23.2 - Thrust Bearings of Tapered Roller Type - Inch Design
24.1 - Thrust Bearings of Ball, Cylindrical Roller and Spherical Roller Types - Metric Design
24.2 - Thrust Bearings of Ball and Cylindrical Roller Types - Inch Design
25.2 - Rolling Bearings, Linear Motion, Recirculating Ball, Sleeve Type - Inch Series
26.2 - Thin Section Ball Bearings - Inch Design

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American National Standard
ABMA Standard
Housings for Bearings with Spherical Outside Surfaces

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Housings for Bearings with Spherical Outside Surfaces

1. Scope

This standard specifies boundary dimensions and tolerances for ball bearings with spherical outside surfaces and extended inner ring width. The feature of mating housing and bearing spherical surfaces is intended to provide initial self-alignment at mounting. Included are pillow block, flanged and take-up unit housings.

The housings in this standard are commonly made from ferrous materials. Those shown in tables 1, 2, 3 and 4 are generally cast, whereas those shown in tables 5, 6 and 7 are generally pressed.

Relubrication features are optional and may be designed to interface with the lubrication holes of mating bearings covered by ANSI/ABMA Standard 15, *Ball Bearings with Spherical Outside Surfaces and Extended Inner Ring Width (Includes Eccentric Locking Collars)*, so that bearings may be properly relubricated. This standard does not include the design or dimensions of relubrication features.

2. Symbols and definitions

Note 1 - The symbols (except those for tolerances) shown in the figures and given in the tables denote nominal dimensions unless otherwise specified.

2.1 Pillow block housings (see figure 1)

A	width of base
D_a	spherical seating diameter of housing, nominal
H_c	distance from mounting base to centerline of spherical seating diameter
H_A	distance from mounting base to centerline of spherical seating diameter of alternate design housing
H_1	height of feet
J	center distance between bolt holes, nominal
L	length of base
N	width of bolt hole
N_1	length of bolt hole

2.2 Flanged housings, square (see figure 2)

A	width (overall)
A_1	width of flange
D_a	spherical seatiing diameter of housing, nominal
J	center distance between bolt holes, nominal
L	length
N	diameter of bolt hole