

## **American National Standard**

# **Rolling Element Bearings – Shaft Mounted – Locknuts, Sleeves, and Locking Devices – Inch Design**

**American  
National  
Standard*****Rolling Element Bearings – Shaft Mounted – Locknuts, Sleeves, and Locking Devices – Inch Design***

ANSI/ABMA 8.2-2023

Revision of ANSI/ABMA 8.2-1999

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**ABSTRACT**

This standard establishes dimensions and minimum physical properties of mounting accessories used for location or fixing inch design ball and roller bearings to the shaft of a machine or mechanism. All components covered by this standard are designed to U.S. Customary (inch) dimensions.

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## Foreword

(This foreword is not a part of American National Standard ANSI/ABMA 8.2-2023, *Rolling Element Bearings – Shaft Mounted – Locknuts, Sleeves, and Locking Devices – Inch Design*).

ANSI/ABMA Standard 8.2-1999 was a revision of the former ANSI/ABMA Standard 8.2-1991 and covered some of the inch design ball and roller bearing mounting accessories in production in the U.S.A.

ANSI/ABMA Standard 8.2-1999 established dimensions and minimum physical properties of mounting accessories used for locating or fixing inch design ball and roller bearings to the shaft of a machine or mechanism. All components covered by ANSI/ABMA Standard 8.2-1999 were designed to U.S. Customary (inch) dimensions. The equivalent S.I. (metric) dimensions were provided for the convenience of those using that system.

ANSI/ABMA 8.2-2023 replaces ANSI/ABMA 8.2-1999. Metric tables were removed and a general update to the latest practices was completed.

The first draft of ANSI/ABMA 8.2-2023 was made in March 2021. It was approved by the ABMA ASC B3 Committee in July 2023 and as an American National Standard on July 19, 2023.

Suggestions for improvement of this standard will be welcome. They may be submitted to [info@americanbearings.org](mailto:info@americanbearings.org).

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## American National Standard –

# Rolling Element Bearings – Shaft Mounted – Locknuts, Sleeves, and Locking Devices – Inch Design

## 1 Scope

There are many methods to mount Rolling Element Bearings, REB. This Standard provides attributes of inch nominal mounting accessories used for locating or fixing REB to the shaft.

The purpose of the standard is to establish dimensions and minimum physical properties of these components consistent and compatible with ABMA, ANSI, and ISO Standards relating to ball and roller bearings. Products manufactured in accordance with this standard will fulfill the expected function when used with properly-designed shafts.

### This standard covers:

#### 1.1 Locknuts and removal nuts, locking devices, and mounting sleeves for Rolling Element Bearings, REB.

#### 1.2 Shaft dimensions

Required dimensions for threads, keyways, and reliefs for shafts.

#### 1.3 General information

Symbols, definitions, part numbers, materials, tolerances, and threads.

## 2 Symbols and definitions

### 2.1 Definitions

#### 2.1.1 Locknuts and removal nuts

##### 2.1.1.1 Bearing locknut

A fastener with internal threads utilized to secure and/or position the inner ring of a rolling element bearing to a shaft or mounting sleeve. (Some sizes may be used as removal nuts).

##### 2.1.1.2 Removal nut

A fastener with internal threads utilized to facilitate disassembly of a bearing from the withdrawal sleeve.

##### 2.1.1.3 Face runout

A dimensional characteristic denoting total indicator reading at the locknut chamfer face while locknut is rotated one revolution on the axis of its threaded pitch diameter. Also denoted as squareness of the face with thread.