ASME B18.24-2023

(Revision of ASME B18.24-2020)

Part Identifying Number (PIN) Code System Standard for B18 Fastener Products

AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers

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FOREWORD

A joint government and American Society of Mechanical Engineers (ASME) B18 meeting was held November 4, 1977 at Defense Industrial Supply Center in Philadelphia, Pennsylvania. A planning group was established to eliminate road blocks to the government acceptance and use of national voluntary standards. Designated the Ad Hoc Fastener Planning Group, the Group's first meeting was held February 2, 1978 at American Society for Testing and Materials (ASTM) Headquarters in Philadelphia. At the meeting, government appendices to ASME B18 metric product standards were endorsed. In addition, an American National Standards Institute (ANSI) metric log was established to prevent duplicate efforts and provide the latest status of B18 metric fastener projects. The U.S. Army Armament Research Development and Engineering Center was tasked to provide government appendices for metric fastener standards on an as-needed basis.

At the ASME B18 Standards Committee meeting on December 5, 1991, based on a B18 Subcommittee 24 suggestion, the B18 Standards Committee unanimously approved a motion that Subcommittee 24 Industry/Government Liaison be reactivated and tasked by the B18 Standards Committee to address the issue of how to best handle needed changes to the various government appendices.

At the Subcommittee 24 meeting held May 12, 1993 at ASME Headquarters in New York City, the part identifying number (PIN) code system concept for B18 product standards was agreed to. The need was expressed that a PIN code system be made available for all users, not just limited to government users. This was based on the recognition that twenty-eight B18 metric and one B18 inch (ANSI B18.2.1) standards contained government appendices for Department of Defense (DOD) PIN acquisition usage that were not considered part of the ASME B18 Standard. Again, the premise based on the aforementioned proposal was to provide a B18 code system for all users without exception.

Based on the B18 Standards Committee mandate, a Subcommittee 24 Task Group was formed to develop ASME B18.24.1 (externally threaded fasteners) first, then proceed with ASME B18.24.2 (internally threaded B18 fasteners) and ASME B18.24.3 (nonthreaded fasteners) standards.

During the April 2003 B18 Subcommittee 24 and B18 Standards Committee meetings, it was agreed to draft a new standard, ASME B18.24, Part Identifying Number (PIN) Code System Standard for B18 Fastener Products, to replace the existing ASME B18.24.1, ASME B18.24.2, and ASME B18.24.3 standards. This was based on users' expressed need to reduce the 21-digit PIN code to a code with 18 digits, to accommodate the 18-digit maximum file name length constraint inherent with widely used computer aided design (CAD) software platforms. ASME B18.24-2004 was approved by the ANSI on April 16, 2004.

Following approval by the ASME B18 Standards Committee and after public review, ASME B18.24a-2006 was approved by the ANSI on December 7, 2006. The title of Table 1-1 was revised along with the column head under "Feature." Material was added under ASME B18.2.6 and ASME B18.9. "ASME B18.16M" was revised to read "ASME B18.16.3M." "ASME B18.27.6" was revised to read "ASME B27.6." "ASME B18.27.7M" was revised to read "ASME B27.7." "ASME B18.27.8M" was revised to read "ASME B27.8." Various changes were made throughout the document to incorporate required changes.

In 2013, Subcommittee 24 of the B18 Standards Committee created a Task Group to review the ASME B18.24 document against new standards published since 2004 and revisions to existing standards. Quite a few changes were integrated into the new version including the addition of several commonly used International Organization for Standardization (ISO) callouts for material and plating and several metric standards that had not previously existed. Several ASTM documents for material and plating were added to the ASME B18.24 PIN system to make it more useful.

The 2015 edition was approved by ANSI as an American National Standard on June 1, 2015.

In the 2020 edition, Note (1) of Table 6-2 was deleted and Table 6-3 was revised to include MIL-PRF-32647. The 2020 edition was approved by ANSI as an American National Standard on July 6, 2020.

ASME B18.24-2023 was approved by ANSI on July 21, 2023.

ASME B18 COMMITTEE
Standardization of Bolts, Nuts, Rivets, Screws, Washers, and Similar Fasteners

(The following is the roster of the committee at the time of approval of this Standard.)

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Revisions and Errata. The committee processes revisions to this Standard on a periodic basis to incorporate changes that appear necessary or desirable as demonstrated by the experience gained from the application of the Standard. Approved revisions will be published in the next edition of the Standard.

In addition, the committee may post errata on the committee web page. Errata become effective on the date posted. Users can register on the committee web page to receive e-mail notifications of posted errata.

This Standard is always open for comment, and the committee welcomes proposals for revisions. Such proposals should be as specific as possible, citing the paragraph number(s), the proposed wording, and a detailed description of the reasons for the proposal, including any pertinent background information and supporting documentation.

Cases

(a) The most common applications for cases are

(1) to permit early implementation of a revision based on an urgent need

(2) to provide alternative requirements

(3) to allow users to gain experience with alternative or potential additional requirements prior to incorporation directly into the Standard

(4) to permit the use of a new material or process

(b) Users are cautioned that not all jurisdictions or owners automatically accept cases. Cases are not to be considered as approving, recommending, certifying, or endorsing any proprietary or specific design, or as limiting in any way the freedom of manufacturers, constructors, or owners to choose any method of design or any form of construction that conforms to the Standard.

(c) A proposed case shall be written as a question and reply in the same format as existing cases. The proposal shall also include the following information:

(1) a statement of need and background information

(2) the urgency of the case (e.g., the case concerns a project that is underway or imminent)

(3) the Standard and the paragraph, figure, or table number(s)

(4) the edition(s) of the Standard to which the proposed case applies

(d) A case is effective for use when the public review process has been completed and it is approved by the cognizant supervisory board. Approved cases are posted on the committee web page.

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Committee Meetings. The B18 Standards Committee regularly holds meetings that are open to the public. Persons wishing to attend any meeting should contact the secretary of the committee. Information on future committee meetings can be found on the committee web page at https://go.asme.org/B18committee.

ASME B18.24-2023
SUMMARY OF CHANGES

Following approval by the ASME B18 Committee and ASME, and after public review, ASME B18.24-2023 was approved by the American National Standards Institute on July 21, 2023.

ASME B18.24-2023 includes the following changes identified by a margin note, **(23)**.

Page	*Location*	*Change*
5	Table 1-1	Revised in its entirety
33	Table 2-1	Thread types “UNRC-3” and “UNRF-3” added
81	Table 5-2	Duplicate “GE7” material code revised to “GE8”
93	Table 5-9	Revised
93	Table 5-10	Revised
93	Table 5-11	Added
109	Nonmandatory Appendix A	Revised in its entirety

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PART IDENTIFYING NUMBER (PIN) CODE SYSTEM STANDARD FOR B18 FASTENER PRODUCTS

1 INTRODUCTORY NOTES

1.1 Scope

1.1.1 This Standard is intended to provide all users (manufacturers, distributors, design and configuration, parts control, inventory control, test and maintenance functions) with the capability to identify externally threaded, internally threaded, and nonthreaded fastener products by a preselected order of coding as specified herein.

1.1.2 The B18 PIN is a self-contained code, with distinct identification linkage to individual ASME B18 fastener product standards. The PIN code concept provides for direct traceability back to the applicable ASME B18 product standard. In case of conflict with this document and the ASME B18 product standard, the ASME B18 product standard shall take precedence.

1.1.3 This Standard is not intended for use as a substitute for the correct usage of the ASME B18 standards for fastener selection and specification. The PIN code is intended as an alternative to the plain text product callout as prescribed in the "Designation" or "Ordering" section of the source B18 product standard. The existence of a PIN code for B18 fastener description is not intended to imply that all products described are available.

1.1.4 A few B18 fasteners cannot be thoroughly identified using the 18-digit system defined in this Standard. If the user does not find the PIN needed in the body of this Standard, consult Nonmandatory Appendices A and B where special PIN systems have been created to specifically identify those items. If the sought-after PIN for the desired B18 fastener is not in the Nonmandatory Appendix B, notice should be sent to the secretary of the B18 committee so that the item can be addressed in the next revision of this Standard.

2 GENERAL GUIDANCE

2.1 Optional Coverage

Each individual ASME B18 fastener product standard provides for optional B18 PIN coverage under "Designation" or "Ordering" data.

2.2 Alpha "I" and "O"

Alpha "I," "O," and "-" are not used in PIN field coding configuration.

2.3 Characteristics

The B18 PIN code shall identify only those characteristics specified in the ASME B18 product standards.

2.4 Succession of ASME B18.24.1, ASME B18.24.2, and ASME B18.24.3 21-Character PIN Codes

Nonmandatory Appendices A and B of this document provide instructions and resources for determining the superseding ASME B18.24.4 18-character PIN code for any cancelled ASME B18.24.1, ASME B18.24.2, and ASME B18.24.3 21-character PIN code.

2.5 Identification of Part Numbering System on Drawings

On drawings or parts lists where a column exists for identifying the manufacturer or its Commercial and Government Entity (CAGE) Code, indicate the CAGE Code "05047/B18.24" or "ASME B18.24." If no column exists or there is space only for the five-digit CAGE Code, then a note must indicate that the part numbers are defined in ASME B18.24.

2.6 Guidance for Using ASME B18.24

This Standard defines an 18-digit alphanumeric system for describing most ASME B18 fasteners. Those using this Standard shall refer to the specific ASME B18 standard for product details first, and only then use the appropriate descriptive number defined in this Standard for placing inquiries and orders.

This Standard can be used to describe fasteners that are not readily available from suppliers, or to create numbers in conflict with the B18 product requirements, such as selecting inappropriate or nonrecommended finishes. This is why it is critical for users to review the applicable ASME B18 standard before using ASME B18.24 to describe a desired fastener. The product requirements cited in individual ASME B18 Standards take precedence over conflicting numbers that might be created using ASME B18.24.