ASME B107.400-2018
(Revision of ASME B107.400-2008)

Striking Tools

AN AMERICAN NATIONAL STANDARD

The American Society of
Mechanical Engineers

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Two Park Avenue • New York, NY • 10016 USA

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This Standard will be revised when the Society approves the issuance of a new edition.

ASME issues written replies to inquiries concerning interpretations of technical aspects of this Standard. Interpretations are published on the Committee web page and under http://go.asme.org/InterpsDatabase. Periodically certain actions of the ASME B107 Committee may be published as Cases. Cases are published on the ASME website under the B107 Committee Page at http://go.asme.org/B107committee as they are issued.

Errata to codes and standards may be posted on the ASME website under the Committee Pages to provide corrections to incorrectly published items, or to correct typographical or grammatical errors in codes and standards. Such errata shall be used on the date posted.

The B107 Committee Page can be found at http://go.asme.org/B107committee. There is an option available to automatically receive an e-mail notification when errata are posted to a particular code or standard. This option can be found on the appropriate Committee Page after selecting “Errata” in the “Publication Information” section.

The American Society of Mechanical Engineers
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FOREWORD

The American National Standards Committee B107 on Socket Wrenches and Drives was originally under the sponsorship of The American Society of Mechanical Engineers (ASME). It was subsequently reorganized as an ASME Standards Committee and its title was changed to Hand Tools and Accessories. In 1996, the Committee's scope was expanded to include safety considerations.

In 1999, ASME initiated a project to consolidate hand tool standards by category of tool. The initial implementation included distinct standards within a single publication bearing a three-digit number corresponding to the responsible B107 subcommittee. It was intended that subsequent revisions would integrate the component standards, resulting in a more traditional document.

The 2008 issue of ASME B107.400 included several standards without replacing some of them. The individual standards remained in effect until this edition of ASME B107.400. ASME B107.56, Body Repair Tools was included in the 2008 edition of ASME B107.400, but is now a stand-alone document under separate cover.

The purpose of ASME B107.400 is to define essential performance and safety requirements specifically applicable to the various tools covered herein. It specifies test methods to evaluate conformance to the defined requirements and indicates limitations of safe use. This Standard supersedes, replaces, and renders obsolete the following standards:

ASME B107.41, Nail Hammers

ASME B107.42, Hatchets and Axes

ASME B107.53, Ball-Peen Hammers

ASME B107.54, Heavy Striking Tools

ASME B107.57, Bricklayers' Hammers and Prospecting Picks

ASME B107.58, Riveting, Scaling, and Tinners' Setting Hammers

In addition to the consolidation of these individual striking tool standards, this revision corrects the striking test from B107.57.

This Standard is intended for voluntary use by establishments that use or manufacture the tools covered. It may also be used as a guide by state authorities or other regulatory bodies in the formulation of laws or regulations.

This Standard is also meant to serve as a guide in developing manuals and posters and for training personnel to work safely.

Members of the Hand Tools Institute Striking and Struck Tools Standards Committee, through their knowledge and hard work, have been major contributors to the development of the B107 standards. Their active efforts in the promotion of these standards are acknowledged and appreciated.

ASME B107.400-2018 was approved by the B107 Standards Committee on May 9, 2018 and by the Board on Standards and Testing on June 29, 2018. It was approved as an American National Standard on September 20, 2018. The requirements of this Standard take effect upon its issue date.

ASME B107 COMMITTEE
Hand Tools and Accessories

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

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CORRESPONDENCE WITH THE B107 COMMITTEE

General. ASME Standards are developed and maintained with the intent to represent the consensus of concerned interests. As such, users of this Standard may interact with the Committee by requesting interpretations, proposing revisions or a case, and attending Committee meetings. Correspondence should be addressed to:

Secretary, B107 Standards Committee
The American Society of Mechanical Engineers
Two Park Avenue
New York, NY 10016-5990
http://go.asme.org/Inquiry

Proposing Revisions. Revisions are made periodically to the Standard 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 periodically.

The Committee welcomes proposals for revisions to this Standard. 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 documentation.

Proposing a Case. Cases may be issued to provide alternative rules when justified, to permit early implementation of an approved revision when the need is urgent, or to provide rules not covered by existing provisions. Cases are effective immediately upon ASME approval and shall be posted on the ASME Committee web page.

Requests for Cases shall provide a Statement of Need and Background Information. The request should identify the Standard and the paragraph, figure, or table number(s), and be written as a Question and Reply in the same format as existing Cases. Requests for Cases should also indicate the applicable edition(s) of the Standard to which the proposed Case applies.

Interpretations. Upon request, the B107 Standards Committee will render an interpretation of any requirement of the Standard. Interpretations can only be rendered in response to a written request sent to the Secretary of the B107 Standards Committee.

Requests for interpretation should preferably be submitted through the online Interpretation Submittal Form. The form is accessible at http://go.asme.org/InterpretationRequest. Upon submittal of the form, the Inquirer will receive an automatic e-mail confirming receipt.

If the Inquirer is unable to use the online form, he/she may mail the request to the Secretary of the B107 Standards Committee at the above address. The request for an interpretation should be clear and unambiguous. It is further recommended that the Inquirer submit his/her request in the following format:

Subject:	Cite the applicable paragraph number(s) and the topic of the inquiry in one or two words.
Edition:	Cite the applicable edition of the Standard for which the interpretation is being requested.
Question:	Phrase the question as a request for an interpretation of a specific requirement suitable for general understanding and use, not as a request for an approval of a proprietary design or situation. Please provide a condensed and precise question, composed in such a way that a "yes" or "no" reply is acceptable.
Proposed Reply(ies):	Provide a proposed reply(ies) in the form of "Yes" or "No," with explanation as needed. If entering replies to more than one question, please number the questions and replies.
Background Information:	Provide the Committee with any background information that will assist the Committee in understanding the inquiry. The Inquirer may also include any plans or drawings that are necessary to explain the question; however, they should not contain proprietary names or information.

Requests that are not in the format described above may be rewritten in the appropriate format by the Committee prior to being answered, which may inadvertently change the intent of the original request.

Moreover, ASME does not act as a consultant for specific engineering problems or for the general application or understanding of the Standard requirements. If, based on the inquiry information submitted, it is the opinion of the Committee that the Inquirer should seek assistance, the inquiry will be returned with the recommendation that such assistance be obtained.

ASME procedures provide for reconsideration of any interpretation when or if additional information that might affect an interpretation is available. Further, persons aggrieved by an interpretation may appeal to the cognizant ASME Committee or Subcommittee. ASME does not "approve," "certify," "rate," or "endorse" any item, construction, proprietary device, or activity.

Attending Committee Meetings. The B107 Standards Committee regularly holds meetings and/or telephone conferences that are open to the public. Persons wishing to attend any meeting and/or telephone conference should contact the Secretary of the B107 Standards Committee. Future Committee meeting dates and locations can be found on the Committee Page at http://go.asme.org/B107committee.

STRIKING TOOLS

1 SCOPE

This Standard provides performance and safety requirements for striking tools including hammers, hatchets, axes, sledges, and mauls listed in Table 1-1. The names and intended uses given in Table 1-1 are those generally recognized.

This Standard is intended to serve as a guide in selecting, testing, and using the hand tools covered herein. Details of design, testing, and use of the tools covered are specified only as they relate to safety. It is not the purpose of this Standard to specify the details of manufacturing.

The designs covered by this Standard are not limited to those named or illustrated. Manufacturers may make conforming striking tools other than those listed. Consumers should consult with manufacturers concerning lists of stock products.

The methods employed to ensure compliance with this Standard shall be determined by the proper regulatory or administrative authority.

2 DEFINITIONS

If a term applies to a particular Category or Categories, the definition is preceded by the Category number(s) (see Table 1-1 and Figures 5.1-1 through 5.7-3 for the categories and the figures applicable to each).

ball peen: for Category 53 tools, the rounded portion of the hammerhead directly opposite the striking face.

bell: for tools in Categories 41, 42, 53, and 57, the portion of the head directly behind the striking face. See *poll*.

bevel:

(a) for Category 57 tools, the underside of the cutting edge (bit) of the bricklayer's hammer.

(b) for Category 58 tools, the angular portion on scaling and tinners' setting hammers adjacent to the bit or peen edge.

bit:

(a) for Category 42 tools, known as the blade bit and is the broad, tapering portion of the head that terminates in a sharpened cutting edge.

(b) for Category 58 tools, the portion of the scaling hammer at the extreme end of the bevel.

blade:

(a) for Category 54 tools, the broad tapering portion of the maul between the eye and the cutting edge of the woodchopper's maul.

(b) for Category 57 tools, the tapered portion of the bricklayer's hammerhead directly opposite the face.

chamfer:

(a) for tools in Categories 41, 42, and 53, the bevel or equivalent radius encircling the perimeter of the striking face.

(b) for Category 54 tools, the bevel or equivalent radius encircling the perimeter of the striking face; also, the bevel on the ends of peening surfaces and scoring edges (see Figures 5.5-1 through 5.5-12).

(c) for Category 57 tools, the angled flat surface or equivalent radius encircling the perimeter of the face of the bricklayer's hammer and prospecting picks and at both ends of the cutting edge of the bricklayer's hammer.

(d) for Category 58 tools, the bevel or equivalent radius of riveting and tinners' setting hammers encircling the perimeter of the striking face; also refers to the bevels on the ends of the peen faces, peen edges, or bits of hammers.

cheeks: for tools in Categories 41 and 57, see *sides*.

claw: for Category 41 tools, the two-pronged portion of the hammerhead directly opposite the striking face.

claw bevel: for Category 41 tools, when provided, the angled portion of the nail slot.

cutting edge:

(a) for Category 42 tools, the sharpened edge of the bit.

(b) for Category 54 tools, the sharpened end of the blade of the woodchopper's maul.

cutting edge (bit): for Category 57 tools, the edge directly opposite the face of the bricklayer's hammerhead at the extreme end of the blade.

digging blade: for Category 42 tools, the portion of the Pulaski pattern or mattock ax head directly opposite the bit, positioned at right angles to the handle axis, and terminating in a sharpened edge.