ASME B107.600-2016

(Revision of ASME B107.600-2008)

Screwdrivers and Screwdriver Bits

AN AMERICAN NATIONAL STANDARD

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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. This Standard will become effective 1 year after the Date of Issuance.

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

Errata to codes and standards may be posted on the ASME Web site 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 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
Two Park Avenue, New York, NY 10016-5990

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FOREWORD

The American National Standards Committee B107, Socket Wrenches and Drives, under sponsorship of The American Society of Mechanical Engineers (ASME), was reorganized on June 28, 1967, as an ASME Standards Committee, and its title was changed to Hand Tools and Accessories. In 1996, its 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. This revision redefines types and classes of screwdrivers and screwdriver bits; designations are provided in Nonmandatory Appendix A.

The purposes of this Standard are to define dimensional, performance, and safety requirements specifically applicable to screwdrivers and screwdriver bits, to specify test and gaging methods to evaluate performance relating to the defined requirements, and to indicate limitations of safe use.

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

ASME B107.600-2008 superseded, replaced, and rendered obsolete the following standards:

B107.15, Flat Tip Screwdrivers
B107.26, Screwdriver Bits, Hand Driven
B107.30, Cross Tip Screwdrivers
B107.31, Screwdrivers, Cross Tip Gaging

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

Previously, the dimensional specifications for flat tip screwdrivers were derived from manufacturers' catalogs. Over a period of several years, members of the B107 Committee reviewed and reevaluated the dimensions against the corresponding standards produced by the ASME B18 Committee for the Standardization of Bolts, Nuts, Rivets, Screws, Washers, and Similar Fasteners. Members of the HTI Screwdriver Standards Committee sourced related fasteners to validate that they are being produced in conformance with the applicable standards. These changes will provide for optimum fit when using flat tip screwdrivers built to conform to this Standard.

Suggestions for improvement of this Standard will be welcomed. They should be sent to The American Society of Mechanical Engineers, Secretary, B107 Standards Committee, Two Park Avenue, New York, NY 10016-5990.

This revision was approved as an American National Standard on June 29, 2016.

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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J. S. Foote, Trade Association Management, Inc.
R. A. Goldmann II, Klein Tools, Inc.
C. Kuznia, General Services Administration

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 for the purpose of providing 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 at go.asme.org/Inquiry.

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.
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. 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 this format may be rewritten in the appropriate format by the Committee prior to being answered, which may inadvertently change the intent of the original request.

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 go.asme.org/B107committee.

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SCREWDRIVERS AND SCREWDRIVER BITS

1 SCOPE

This Standard provides performance and safety requirements for noninsulated, hand-driven screwdrivers and hand-driven, hexagonal shank screwdriver bits intended for manual operation in driving or removing screws. The screwdrivers and bits are of the types normally used by cabinetmakers, carpenters, sheet metal workers, production workers, mechanics, etc.

Inclusion of dimensional data in the Standard is not intended to imply that all of the products described herein are stock production sizes. Manufacturers may make sizes other than those listed. Consumers are requested to consult with manufacturers concerning lists of stock production sizes.

2 DEFINITIONS

See Fig. 1.

assembly: the blade plus the handle.

bit: removable driver comprised of a hexagonal shank plus tip.

blade: the shank plus the tip.

bolster: a change in the geometry of the shank at the junction of the handle.

handle: that portion of the screwdriver that is gripped with the hand.

shank: the portion of the blade between the tip and the handle.

tip: the portion of the blade that engages the screw recess.

3 REFERENCES

The following is a list of publications referenced in this Standard. The latest available edition shall be used.

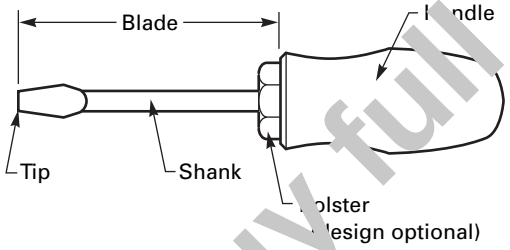
ASTM D2240, Standard Test Method for Rubber Property – Durometer Hardness

ASTM E18, Standard Test Methods for Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials

ASTM F1505, Standard Specification for Insulated and Insulating Hand Tools

Publisher: American Society for Testing and Materials (ASTM International), 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959 (www.astm.org)

Fig. 1 Screwdriver Nomenclature



Guide to Hand Tools — Selection, Safety Tips, Proper Use and Care

Publisher: Hand Tools Institute (HTI), 25 North Broadway, Tarrytown, NY 10591 (www.hti.org)

IEC 60900, Live working — Hand tools for use up to 1000 V a.c. and 1500 V d.c.

Publisher: International Electrotechnical Commission (IEC), 3, rue de Varembé, Case Postale 131, CH-1211, Genèva 20, Switzerland/Suisse (www.iec.ch)

SAE J1703, Motor Vehicle Brake Fluid

Publisher: SAE International, 400 Commonwealth Drive, Warrendale, PA 15096 (www.sae.org)

4 CLASSIFICATION

Type I: Screwdriver Assembly
Class 1: Flat Tip
Class 2: Cross Tip Phillips[1] (PH)
Class 3: Cross Tip Pozidriv[1] (PZ)

Type II: Screwdriver Bit
Class 1: Flat Tip
Class 2: Cross Tip Phillips (PH)
Class 3: Cross Tip Pozidriv (PZ)

5 PERFORMANCE REQUIREMENTS

The illustrations herein are descriptive, not restrictive, and shall not preclude designs otherwise in accordance with the requirements of this Standard.

Conformance to marking and other requirements not determined by test shall be verified by visual examination.

[1] Phillips and Pozidriv PZI, PZ2, and PZ3 are registered trademarks of the Phillips Screw Co.