ASME B107.410-2018
(Revision of ASME B107.410-2008)

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Struck Tools

AN AMERICAN NATIONAL STANDARD

The American Society of
Mechanical Engineers

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(Revision of ASME B107.410-2008)

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The American Society of Mechanical Engineers
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CONTENTS

Foreword v

Committee Roster vi

Correspondence With the B107 Committee vii

1 Scope 1

2 Definitions 1

3 References 6

4 Classification 6

5 Performance Requirements 6

6 Tests 25

7 Safety Requirements and Limitations of Use 41

Figures

5.1-1 Category 43 Wood-Splitting Wedges 9

5.1-2 Category 43 Square Head Wedges 9

5.1-3 Category 43 Stave and Oregon-Splitting Wedges 9

5.2-1 Category 44 Glaziers' Chisels 10

5.2-2 Category 44 All-Steel Wood Chisels 10

5.2-3 Category 44 Wood Chisels 11

5.2-4 Category 44 Ripping Chisels 12

5.2-5 Category 44 Flooring/Electricians' Chisels 13

5.3-1 Category 46 Multi-Spline Extractor 14

5.3-2 Category 46 Spiral Flute Extractor 14

5.3-3 Category 46 Straight Flute Extractor 15

5.3-4 Category 46 Tapered Flute Extractor 15

5.4.1-1 Category 48 Type I Chisels 16

5.4.1-2 Category 48 Type I Handle-Held Chisels 16

5.4.2-1 Category 48 Type II Punches 17

5.4.2-2 Category 48 Type II Handle-Held Punches 18

5.4.3-1 Category 48 Type III Drift Pins 18

5.5.1-1 Category 49 Type I Nail Set 19

5.5.2-1 Category 49 Type II (Self-Centering) Nail Set 19

5.6-1 Category 50 Brick Chisel and Brick Set 20

5.6-2 Configuration of Category 50 Brick Chisel and Brick Set Bevels 20

5.6-3 Category 50 Star Drill 21

5.7.1-1 Category 52 Type I Struck Nail-Puller Bars 22

5.7.1-2 Category 52 Type II, Class 1 Nonstruck Multipurpose Bar 23

5.7.1-3 Category 52 Type II, Class 2 Nonstruck Ripping/Wrecking Bar 23

5.7.2-1 Category 52 Type III, Class 1 Close Quarter Pry Bar 23

5.7.3-1 Category 52 Type III, Class 2 Die Setter Pry Bar 23
5.7.4-1 Category 52 Type III, Class 3 Handled Pry Bar 23
5.7.5-1 Category 52 Type III, Class 4 Pinch Bar 23
5.7.6-1 Category 52 Type III, Class 5 Rolling Head Pry Bar 24
5.8-1 Category 59 Striking Wrenches 24
5.8-2 Category 59 Slugging Wrenches 24
5.8-3 Struck Block Cross Section 24
6.2.2-1 Impact Test for Category 44 Types I and II Chisels 30
6.2.8-1 Category 52 Handle Impact Test 33
6.2.9.1-1 Impact Test Setup 34
6.4-1 Category 44 Side Force Test 35
6.5.1-1 Category 44 Permanent Set Test 36
6.6-1 Category 48 Bending Moment Test 36
6.7-1 Static Force Test for Category 48 Handle-Held Punches 37
6.7-2 Static Force Test for Category 48 Handle-Held Chisels 37
6.9-1 Prying Test 38
6.10.2-1 Point End Test 40

Tables

1-1 Striking Tools 2
2-1 Appropriate Striking Tools 3
5.9-1 Striking Face and Chamfer 25
5.11-1 Hardness Requirements 25
6.2.4-1 Category 46 Impact Test Parameters 30
6.2.5-1 Impact Test Parameters — Category 48 Type I Chisels 31
6.2.5-2 Impact Test Parameters — Category 48 Type II Punches 32
6.2.5-3 Impact Test Parameters — Category 48 Type III Drift Pins 33
6.2.8-1 Category 52 Handle Impact Test Specifications 33
6.2.9.1-1 Category 59 Impact Test Specifications 34
6.3-1 Category 52 Handle Tensile Force Test Loads 35
6.9-1 Category 52 Type II Prying End Test Specifications 39
6.10.1-1 Category 52 Type III Prying End Test Specifications 39
6.10.2-1 Category 52 Point End Test Specifications 40

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 B107.410 included several standards without replacing some of them. The individual standards remained in effect until this edition of ASME B107.410.

The purpose of ASME B107.410 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 B107.43, Wood-Splitting Wedges

ASME B107.44, Chisels — Glaziers', Wood, Ripping, Flooring/Electricians'

ASME B107.46, Stud, Screw, and Pipe Extractors

ASME B107.48, Metal Chisels, Punches, and Drift Pins

ASME B107.49, Nail Sets

ASME B107.50, Brick Chisels, Brick Sets, and Star Drills

ASME B107.52, Nail-Puller Bars and Pry Bars

ASME B107.59, Slugging and Striking Wrenches

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 B107.410-2018 was approved by the B107 Standards Committee on August 17, 2018, and by the Board on Standards and Testing on November 7, 2018. It was approved as an American National Standard on November 9, 2018. The requirements of this Standard take effect upon its date of issuance.

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Hand Tools and Accessories

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

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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.

STRUCK TOOLS

1 SCOPE

This Standard provides performance and safety requirements for struck tools, including splitting wedges; glaziers' chisels; wood chisels; ripping chisels; flooring/electricians' chisels; handheld screw and pipe extractors; handheld and handled metal chisels, punches, and drift pins; nail sets; brick chisels, brick sets, and handheld star drills; nail-puller bars; pry bars; and slugging and striking wrenches. The tools covered herein are listed by Category number 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 struck tools other than those listed. Consumers are requested to 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 for the struck tool Categories and the figures applicable to each).

appropriate striking tool: a striking tool with a striking face not less than 0.375 in. (9.53 mm) larger in diameter than the struck face of the struck tool (see Table 2-1).

bevel:

(a) for Category 43 tools, the angular portion of the wedge adjacent to the splitting edge and extending to the taper.

(b) for Category 44 tools, the angular or curved portion of the chisel adjacent to the cutting edge extending to the blade or taper.

(c) for Category 48 tools, the conical portion of the punch adjacent to the point end extending to the taper or the angular portion of the chisel adjacent to the cutting edge extending to the taper.

(d) for Category 50 tools, the angular portion of the brick chisel, brick set, or star drill adjacent to the cutting edge and extending to the taper.

blade: for Category 44 tools, the portion of the glaziers' or wood chisel opposite the struck face used for cutting.

body:

(a) for Category 44 tools, on glaziers' and wood chisels, the metal portion of the chisel extending from the blade. On ripping and flooring/electricians' chisels, the straight portion of the chisel between the chamfer and the taper.

(b) for Category 46 tools, the portion of the extractor exclusive of the taper and/or flutes.

(c) for Category 48 tools, the straight portion of the punch or chisel between the chamfer and taper or the tapers of the drift pin.

(d) for Category 49 tools, the portion of the nail set between the head and taper, used for holding during nail-setting operation.

(e) for Category 50 tools, the straight portion of the chisel or set between the chamfer and the taper or the straight portion of the star drill between the chamfer on one end and the taper, flute, and flute side on the other end.

(f) for Category 52 tools, the straight portion of the bar (excluding the handle grip when provided) used for gripping during nail-pulling or prying operations.

box end: for Category 59 tools, the portion of wrench that engages axially with the hex head of a threaded fastener.

chamfer:

(a) for Category 43 tools, the angled flat surface or equivalent radius of the wedge encircling the perimeter of the struck face.

(b) for Category 44 tools, the angled flat surface or equivalent radius between the struck face and the body of the chisel encircling the perimeter of the struck face.