

ANSI/BHMA A156.115-W-2006



AMERICAN NATIONAL STANDARD

FOR

**HARDWARE PREPARATION IN WOOD DOORS WITH WOOD
OR STEEL FRAMES**



SPONSOR

BUILDERS HARDWARE MANUFACTURERS ASSOCIATION, INC.

AMERICAN NATIONAL STANDARDS INSTITUTE, INC.

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AMERICAN NATIONAL STANDARD

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FOREWORD (This Foreword is not a part of ANSI/BHMA A156.115-W)

This Standard was first published by the Door and Hardware Institute in a series of individual A115 standards, which are now combined into single documents for steel and wood doors. ANSI approval was secured under the Canvass Method. BHMA was accredited on 21 March 1983 by ANSI as a sponsor using the Canvass Method.

This Standard was developed as a joint effort by members of SDI, WDMA, DHI, HMMA, BHMA and CSDMA. The committee is grateful to Allan Ashachik for his guidance and technical contributions as the first chairman of the reconstituted group. The BHMA recognizes that errors will be found, items will become obsolete, and new products, methods and materials will be developed. With this in mind, the Association plans to update, correct and revise these Standards on a regular basis.

It is recommended that individual manufacture's catalogs be consulted.

Users of this Standard should also consult applicable local building codes as to requirements affecting the functions of hinges used on fire doors.

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1. SCOPE AND PURPOSE

1.1 This Standard covers all significant dimensional attributes for mounting common hardware products in wood doors and metal or wood frames. All dimensions shall be as shown on the accompanying drawings.

1.2 This standard was developed to show only the most commonly used preparations for door hardware, and provide targets for standardization. Where multiple configurations are in common usage, separate drawings are provided. For other configurations, it is recognized that these standards may be used in part, or with exceptions, while still providing some degree of basic guidance and standardization.

2. GENERAL REQUIREMENTS

- 2.1 **Preparations** covered by this standard are intended for use in doors 1 ¾ inches (44.5mm) ± 1/16 inch (1.6mm) in thickness unless otherwise specified.
- 2.2 **The center line** of the lock in the door shall be located in reference to the center line of its strike.
- 2.3 **Location of Operable Parts** in accessible openings shall be between 34 and 48 inches.
- 2.4 **Door Edge** Doors shall be furnished with a beveled or square edge unless otherwise specified.
- 2.5 **Door Reinforcement** Doors shall be properly reinforced to support the performance requirements of the hardware application.
- 2.6 **Tolerances** for cutouts are shown on individual drawings.
- 2.7 **Metric Equivalents** are shown in the table below (inclusion in the individual drawings is not possible due to size constraints).

TO CONVERT INCHES TO MILLIMETERS, MULTIPLY INCHES BY 25.4 TO CONVERT MILLIMETERS TO INCHES, MULTIPLY MILLIMETERS BY 0.03937.							
Inches	mm	Inches	mm	Inches	mm	Inches	mm
.005	.1	1/2	12.7	1 1/2	38.1	3 23/32	94.5
.008	.2	9/16	14.3	1 5/8	41.3	3 3/4	95.3
.015	.4	5/8	15.9	1 3/4	44.5	3 7/8	98.4
1/64	.4	11/16	17.5	1 49/64	44.8	4	101.6
1/32	.8	23/32	18.3	1 13/16	46.0	4 1/8	104.8
1/16	1.6	3/4	19.1	2	50.8	4 1/2	114.3
5/64	2	13/16	20.6	2 1/8	54	4 9/16	115.9
3/32	2.4	27/32	21.4	2 1/4	57.2	4 7/8	123.8
1/8	3.2	7/8	22.2	2 7/16	61.9	5	127
9/64	3.6	57/64	22.6	2 15/32	62.7	5 1/2	139.7
5/32	4	15/16	23.8	2 1/2	63.5	5 3/4	146.1
7/32	5.6	31/32	24.6	2 3/4	69.9	6 1/4	158.8
15/64	6	1	25.4	2 27/32	72.2	6 1/2	165.1
1/4	6.4	1 1/16	27	3 1/4	82.6	6 3/4	171.5
5/16	7.9	1 1/8	28.6	3 5/16	84.1	7	177.8
3/8	9.5	1 15/64	31.4	3 3/8	85.7	7 1/4	184.2
7/16	11.1	1 1/4	31.8	3 1/2	88.9	8	203.2
15/32	11.9	1 3/8	34.9	3 5/8	92.1	35 1/2	901.7

3. APPLICABLE DOCUMENTS

3.1 ANSI/BHMA Standards A156.2 for Bored and Preamsembled Locks and Latches, A156.5 for Auxiliary Locks, A156.12 for Interconnected Locks and Latches, A156.13 for Mortise Locks and Latches, A156.16 for Auxiliary Hardware, and other standards available at www.buildershardware.com.

3.2 Please consult the relevant standards of the participating Associations:
 Canadian Steel Door Manufacturers Association www.csdma.org

Door and Hardware Institute www.dhi.org
Hollow Metal Manufacturers Association www.naamm.org
Steel Door Institute www.steeldoor.org
Window and Doors Manufacturers Association www.nwwda.org

4. DEFINITIONS

4.1 Auxiliary Dead Latch A plunger which, when actuated, automatically locks a projected latch bolt against return by end pressure.

4.2 Auxiliary Locks A lock having a latch bolt or dead bolt operated by a key or a turn or both. This lock is often used in addition to another lock which is or is not key operated but has a latch bolt operated by knobs, levers or thumbpiece.

4.2.1 Bored Dead Latch A lock fitting round bored openings in the face and edge of a door and having a dead latch operated by a key or turn or both.

4.2.2 Bored Dead Lock A lock fitting round bored openings in the face and edge of a door and having a dead bolt operated by a key or turn or both.

4.3 Bored Locks Bored lock is used herein to designate locks having cylindrical shaped bodies which are mounted in holes bored in the door.

4.4 Dead Bolt A lock component which protrudes from, or is withdrawn into the lock front by action of the lock mechanism. When the door is closed and the dead bolt is thrown, it extends into a hole provided in the strike, locking the door and does not return with end pressure.

4.5 Door Edge The two vertical surfaces of the door that are perpendicular to the door face.

4.5.1 Beveled Edged Door The angle of the lock or hinge edge of the door in relation to the face of the door. The standard bevel is 1/8 inch in 2 inches, or approximately 3 degrees.

4.6 Door Face Surface of the door exposed to view when the door is closed.

4.7 Face Cut Out A piercing of the door face for hardware, lites, louvers or accessories.

4.8 Flush Bolt A type of bolt that when applied it is flush with the edge or face of the door.

4.9 Frame Frame is that portion of an opening which gives a finished appearance to a cutout in a wall and provides a square and plumb opening on which to hang a door.

4.10 Head Horizontal frame member atop of opening or top of transom frame.

4.11 Hinge Face That face of the door viewed when observing the hinge knuckles on the door and frame.

4.12 Interconnected Lock A mechanically interconnected locking mechanism having a separate latch bolt or dead locking latch bolt and dead bolt designed for installation in round bored openings in the edge and face of a door.

4.13 Latch Bolt A lock component having a beveled end which projects from the lock front in its extended position, but is forced back into the lock case by end pressure or drawn back by action of the lock mechanism. When the door is closed, the latch bolt projects into a hole provided in the strike, holding the door in a closed position.

4.14 Latch Strike A plate fastened to the door or frame into which the bolts project.