

ANSI/BHMA A156.41-2017



**STANDARD
FOR
DOOR HARDWARE SINGLE MOTION TO EGRESS**



**SPONSOR
BUILDERS HARDWARE MANUFACTURERS ASSOCIATION, INC.**

**Approved by the
AMERICAN NATIONAL STANDARDS INSTITUTE
December 12, 2017**

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FOREWORD (This Foreword is not a part of ANSI/BHMA A156.41)

The general classification of builders hardware includes a wide variety of items which are divided into several categories. To recognize this diversity, a sectional classification system has been established. This Standard is the result of the collective efforts of members of the Builders Hardware Manufacturers Association, Inc. who manufacture these products. The total product standards effort is therefore, a collection of sections, each covering a specific category of items.

Strength, cycle, operational tests and where it has been necessary, material and dimensional requirements have been established to insure safety and stability to which the public is entitled. There are no restrictions on design except for those dimensional requirements imposed for the reasons given above.

This Standard is not intended to obstruct but rather to encourage the development of improved products, methods and materials. The BHMA recognizes that errors will be found, items will become obsolete, and new products and methods will be developed. With this in mind the Association plans to update, correct and revise these Standards on a regular basis. It shall also be the responsibility of manufacturers to request such appropriate revisions.

1. SCOPE

1.1 This standard describes requirements for doors and door hardware to comply with Code Requirements for single operation egress.

1.2 Tests described in this Standard are performed under laboratory conditions. In actual usage, results vary because of installation, door and frame construction, maintenance and environmental conditions.

2. DEFINITIONS

2.1 **Single Operation Egress** To allow a door to be opened for passage by releasing all latch and locking mechanisms on a door with one motion in a single linear or rotational direction using only one hand and without the use of a key, a tool, or special knowledge or effort.

2.2 **Unlatch** Single term used to encompass release of all latches, bolts, or other components used to hold the door in a closed position.

2.3 **Lockset** Single term used to encompass door hardware such as exit devices, cylindrical locks, mortise locks, electromagnetic locks and push/pull operators.

3. GENERAL TEST PARAMETERS

3.1 Failure of the test fixture does not constitute pass or failure of the tests.

3.2 **Mounting locks** The test equipment shall permit installation of the complete lockset with trim in accordance with the manufacturer's recommendations as described in the template and instruction sheets regularly furnished. Unless otherwise specified, locksets shall be properly mounted in accordance with the manufacturer's instructions. The lock front-to-strike spacing shall be 1/8 in. +/- 1/32 (3.2 +/- 0.8 mm) at centerline of bolt for all tests.

3.3 Tests shall be made using standard sets. Complete instructions and templates shall be included. One sample required.

3.4 **Measuring Equipment** All instruments and equipment used to conduct tests for recording data need to be calibrated and maintained for effectiveness and continued accuracy. Calibration of equipment shall be traceable to the National Institute of Standards and Technology (NIST). The frequency of calibration depends on the recommendation of the particular test equipment manufacturer with a minimum being once per year. Measuring equipment used shall have a known measurement error and be capable of qualifying the value being measured.

4. REQUIREMENTS FOR SINGLE OPERATION EGRESS FOR HARDWARE

4.1 **Rotational Release (Lever/Knob/Turn etc.) Procedure** Mount the lockset on the door. Using a protractor, measure the degrees of rotation until the hardware is unlatched.

Requirements A single operation of less than 90° of rotation shall allow the door to be opened.

Push/Pull Release (Push Pad, Bar, Paddle, Pull etc.) Procedure Mount the lockset on the door. Push or pull until the hardware is unlatched.

Requirements The single push or pull operation shall allow the door to be opened.

5. REQUIREMENTS FOR SINGLE OPERATION EGRESS FOR DOORS

5.1 For a door to meet requirements for single operation egress, it shall not have more than one single operation release hardware device.