



Standard Test Methods for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact¹

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1. Scope

1.1 These test methods cover the ability of window assemblies of various types to restrain, delay, or frustrate forced entry.

1.2 For purposes of these test methods, window assemblies are defined as described in 1.2.1 – 1.2.5 and as shown in Fig. 1. Window assemblies with a combination of operable sash and fixed panes (lites) shall be classified and tested separately for each type.

1.2.1 *Type A*—A window assembly which incorporates one or more sash that open by *sliding*, either vertically or horizontally within the plane of the wall.

1.2.2 *Type B*—A window assembly which incorporates one or more sash that are *hinged* at or near two corners of the sash and that open toward the exterior (outswinging) or toward the interior (inswinging).

1.2.3 *Type C*—A window assembly which incorporates one or more sash that are *pivoted* so that part of the sash opens toward the interior and part of it opens toward the exterior.

1.2.4 *Type D*—A window assembly which incorporates one or more *fixed* panes (lites) or stationary sash that are designed not to open.

1.2.5 *Type E*—A window assembly which incorporates a series of overlapping horizontal louvers that are pivoted simultaneously by a common actuator so that the bottom edge of each louver swings outward and the top edge swings inward during operation.

NOTE 1—See Fig. 1 for graphic depiction of window assembly types.

1.3 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appro-*

priate safety and health practices and determine the applicability of regulatory requirements prior to use.

2. Referenced Documents

2.1 *ASTM Standards*:²

E631 Terminology of Building Constructions

2.2 *AAMA Standard*:³

AAMA 1302.5-76 Voluntary Specifications for Forced Entry Resistant Aluminum Prime Windows

2.3 *CAWM Standards*:³

CAWM 301-90 Forced Entry Resistance Tests for Windows
CMBSO 1-79 California Model Building Security Ordinance

3. Terminology

3.1 *Definitions*—Definitions for standard terminology can be found in Terminology E631.

3.2 *Definitions of Terms Specific to This Standard*:

3.2.1 *locking device(s) (lock)*, *n*—one or more components of a window assembly intended to resist the opening of movable sash or louvers from the exterior.

3.2.2 *louver*, *n*—a glazing component of a louver window.

3.2.3 *louver holder*, *n*—a component of a louver window that holds the louvers at each end and transfers the pivoting and locking forces from the actuating mechanism/s to the louvers.

3.2.4 *sash operator*, *n*—a component of the window assembly that is used to move, pivot, or adjust the position of a movable sash within the window frame. (The sash operator in some window assemblies is also a locking device.)

4. Summary of Test Method

4.1 The procedure consists of mounting a specimen into a test assembly fixture which in turn is mounted to a wall support fixture, and, after removing all exterior fasteners and loose

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from American Architectural Manufacturers Association (AAMA), 1827 Walden Office Square, Suite 550, Schaumburg, IL 60173-4268, <http://www.aamanet.org>.