



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 determine 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 classified as described in 1.2.1-1.2.4 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.

1.3 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

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 appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.* For a specific hazard statement, see Section 8.

2. Referenced Documents

2.1 ASTM Standards:

E 631 Terminology of Building Constructions²

¹ These test methods are under the jurisdiction of ASTM Committee E06 on Performance of Buildings and are the direct responsibility of Subcommittee E06.51 on Component Performance of Windows, Curtain Walls, and Doors.

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² *Annual Book of ASTM Standards*, Vol 04.11.

3. Terminology

3.1 *Definitions*: Definitions for standard terminology can be found in Terminology E 631.

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 from the exterior.

3.2.2 *sash operator, n*—a component of the window assembly that is used to move, pivot, or to 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 component items, specified loads and forces are applied to the window test specimen in a prescribed sequence. Following removal of all loads, a determination is made as to whether or not entry can be gained through the window test specimen from the exterior.

5. Significance and Use

5.1 These test methods are intended to establish a measure of resistance for window assemblies subjected to attacks (other than impacting glazing materials) by unskilled or opportunistic burglars. Resistance to higher levels of force generated by skilled burglary attack requires methods, such as alarms, communication, or apprehension systems, or special security glazing materials more sophisticated than those evaluated by these test methods.

5.2 Acceptance criteria for performance levels are a matter for authorities having specific jurisdiction to establish. Suggested guidelines are found in the Annex. Annex A1

6. Test Criteria

6.1 *Window Test Specimen*—The same window assembly shall be used for all testing and shall contain sash having the greatest height and width for which approval is sought.