



Standard Test Methods for Detention Locks for Swinging Doors¹

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1. Scope

1.1 These test methods cover the apparatus, procedures, and acceptance conditions for evaluating the normal operational performance and the performance characteristics under assault conditions of locks used in swinging door assemblies in detention and correctional institutions. Thus, they only give an indication of the performance characteristics of locks in actual service. Such variables as installation and maintenance conditions are not considered.

1.2 It is the intent of these test methods to help ensure that detention locks perform at or above minimum acceptable levels to control passage to unauthorized or secure areas, to confine inmates, and to delay and frustrate escape attempts and resist vandalism. It is recognized that in order to meet the intent of these test methods, door and frame assemblies must be compatible with the level of performance required by Test Method F 1450 – 92.

1.3 The values stated in inch-pound units are to be regarded as the standard. The values 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.*

2. Referenced Documents

2.1 ASTM Standards:

E 152 Methods for Fire Tests of Door Assemblies²

F 1450 Test Methods for Hollow Metal Swinging Door Assemblies for Detention Facilities³

2.2 ANSI Standard:⁴

ANSI A156.5 Auxiliary Locks and Associated Products

2.3 UL Standards:⁵

UL-437 Standard for Key Locks

UL-1034 Standard for Burglary Resistant Electric Locking Mechanisms

3. Terminology

3.1 Definitions:

3.1.1 Bolts:

3.1.1.1 *bolt projections, n*—the distance the lock bolt extends from the lock case measured with the lock bolt in an extended position.

3.1.1.2 *dead bolt, n*—a lock component having an end that protrudes from, or is withdrawn into, the lock front by action of the lock mechanism by rotating the key or thumb turn. When the door is closed and the dead bolt is thrown, it extends into a hole provided in the strike, locking the door, and will not return with end pressure.

3.1.1.3 *deadlocking latch bolt, adj*—a component which, when actuated, automatically locks the projected latch bolt against return by end pressure. Also referred to as an auxiliary latch bolt or roller bolt.

3.1.1.4 *latch bolt, n*—a lock component having a beveled end that projects from the lock front in its extended position, but may be forced back into the lock case by end pressure or drawing 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. Sometimes referred to as a *snapholt*.

3.1.2 *bolt throw, n*—the distance the lock bolt travels from a retracted to a fully extended position.

3.1.3 *cylinder, n*—the subassembly of a lock containing a plug with a key slot and tumbler mechanism.

3.1.3.1 *builders hardware cylinder, adj*—a key cylinder of similar design to the mogul cylinder except smaller (1⁵/₃₂ in. (40 mm) in diameter), with keys and internal parts at least half the size of mogul cylinders. Also known as *commercial cylinders and mortise cylinders*. See ANSI A156.5, 6.9.

3.1.3.2 *mogul cylinder, adj*—a pin tumbler cylinder approximately 2 in. (51 mm) in diameter, 2 in. long.

3.1.3.3 *mogul key, adj*—an oversized key designed to fit the mogul cylinder and is approximately 1¹/₂ in. (38 mm) by 3³/₈ in. (92 mm).

3.1.3.4 *paracentric cylinder, commonly referred to as a lever tumbler cylinder, adj*—a key cylinder consisting of a cylinder that is an integral part of the lock.

3.1.3.5 *paracentric key, commonly referred to as a lever*

¹ These test methods are under the jurisdiction of ASTM Committee F-33 on Detention and Correctional Facilities and are the direct responsibility of Subcommittee F33.04 on Operational Systems.

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² Discontinued; see 1994 Annual Book of ASTM Standards, Vol 04.07.

³ Annual Book of ASTM Standards, Vol 04.07.

⁴ Available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.

⁵ Available from Underwriters Laboratories, 333 Pfingsten Rd., Northbrook, IL 60062.