

ANSI/BHMA A156.30–2003 American National Standard for High Security Cylinders

Standard ANSI/BHMA A156.30 establishes requirements for mechanical and electrified high security cylinders and includes definitions, general information and tests (required equipment and procedures). For the purpose of this standard, High Security Cylinder includes mechanical and electromechanical cylinders, as well as the electronic lock sub assemblies that are analogous to the cylinder assemblies. Cylinders include their keys or electronic credentials, their retainers (mechanical pins, levers, discs) or electronic control device, and their cylinder tailpiece or cam or electronic output port.

Tests and required results in this standard include:

- Key Control
- Drill Resistance
- Surreptitious Entry Resistance

The following are partial descriptions of test values. Please see the complete standard for additional tests:

Key Changes This feature is intended to provide security by preventing picking, and key interchange. The theoretical mechanical key changes shall be based on the manufacturer’s published information for each keyway in the system. Electrical key changes shall be based on design features demonstrating the capability. Electrified cylinders shall not accept more than 800 incorrect key changes per hour.

Requirements

Level C	Level B	Level A
Mechanical: 500,000 theoretical	Mechanical: 1,000,000 theoretical	Mechanical: 10,000,000 theoretical
Electrical: 2^{26}	Electrical: 2^{64}	Electrical: 2^{128}

Pick Resistance-Mechanical Resistance to picking is intended to provide protection from manipulation of the retainers (or pins) through the key way or other openings in the cylinder face. The manufacturer shall demonstrate that the lock provides pick resistance as shown in the standard.

Pick Resistance-Electrical Electronic lock input devices shall withstand an over-voltage attack test and an ESD attack test to the I/O conducting terminals without allowing an entry. The over-voltage and ESD attack must not cause the locking device to unlock, but unlike the ANSI/BHMA A156.25 tests, could cause the device to also fail to unlock for subsequent key operations without constituting failure of the test.

Magnet Resistance Test Using a standard 150lb pulling force magnet (Efston Science model #42447 or equivalent), the cylinder is manipulated for a duration of two minutes in an attempt to open the cylinder. Application of the magnet shall not cause the locking device to unlock at any time.

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Note: This document is not to be used as a substitute for the standard. Users should refer to the entire standard for complete requirements and details. For further information go to www.buildershardware.com.