

# Hardware Highlights



## ANSI/BHMA A156.5-2014 American National Standard for Cylinders and Input Devices for Locks

This Standard establishes performance requirements for bored and preassembled locks and latches, and includes cycle tests, strength tests, operational tests, security tests, material evaluation tests, finish tests, and dimensional criteria.. For further information, consult the full standard, ANSI/BHMA A156.5 for Cylinders and Input Devices for Locks.

BHMA has created this series of *Hardware Highlights* to provide useful, accessible information about builders hardware for anyone with an interest in devices that hang, control, secure, and trim the doors. BHMA is the trade association which represents almost all of the North American manufacturers of builders hardware. One of its main activities since 1983 has been the development and maintenance of ANSI-approved standards for 35 separate product categories.

**Product Performance:** Purchasers of cylinders and input devices certified to A156.5 (<http://buildershardware.com/cpd>) can be assured products will perform to their expectations.

Below are an explanation and some examples of the evaluations conducted for certification:

OPERATION	DURABILITY	SAFETY & SECURITY	ELECTRICAL
Attributes such as the force to retract the latch and force to lock or unlock the door are measured to ensure ease of egress and security. The force to insert or remove the key is covered as well, requiring no greater than 3 pounds for those operations.	Building products are expected to last a long time, and builders hardware is no exception. Grade 1 cylinders, for example, must pass a rigorous test through 40,000 cycles and still operate at reasonable forces.	Locksets are counted on to allow carefree operation to those who are authorized, and ensure a high degree of security from the outside. An array of strength tests evaluates the cylinder's ability to withstand efforts at authorized entry.	Performance requirements are also specified for electrical input devices such as card readers, keypads, and mechatronic type cylinders, adding tests such as ESD resistance, over-voltage, and water resistance.

**Building Codes** Builders hardware provides several attributes that are essential to building safety and performance, including egress and fire protection. BHMA locksets are designed to comply with all applicable requirements. For example, hardware for fire doors is evaluated and listed to UL 10C by an accredited third-party testing laboratory.

**Accessibility** There are various types of trim which meet the ADA and A117.1 requirements for operable parts to be "operable with one hand and shall not require tight grasping, pinching or twisting of the wrist." Lever or paddle type trim meets these stipulations, while knob trim should be avoided for accessible routes. In addition, BHMA certified hardware must comply with the operational forces in their respective standards, which have been shown to be suitable for accessible applications.

**Sustainability** Cylinders and input devices contribute to building sustainability through their verified durability, as well as material characteristics such as recycled content and recyclability. The reliable closing and sealing of openings can also contribute to energy conservation. BHMA has developed Product Category Rules, which will further define sustainability requirements and guide life cycle assessments and environmental performance declarations.

**Function Numbers:** Another significant contribution of standards for product specification is a numbering system for lock function. Please consult A156.5 for the full list; an example is provided here:

E09231AL refers to a Grade 1 cylinder used in bored locks only and is rated to be drill and pick resistant, per UL 437.



To purchase a copy of any BHMA Standard, go to [www.buildershardware.com](http://www.buildershardware.com) or call 800-699-9277.  
This document is not a substitute for the full standard. Refer to the entire standard for full information.