

Hardware Highlights

ANSI/BHMA A156.13-2017 American National Standard for Mortise Locks

Standard ANSI/BHMA A156.13-2017 establishes requirements for Mortise Locks and Latches and includes operational tests, strength tests, security tests, cycle tests, finish tests and dimensional criteria. For further information, consult the full standard, ANSI/BHMA A156.13 for Mortise Locks & Latches.

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 mortise locks certified to A156.13 (<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	SECURITY	APPEARANCE
Attributes such as the force to retract the latch and force to close the door are measured to ensure ease of egress and smooth closing. The forces to open the door vary by the type of trim. For example: lever operated locks must open with a maximum torque of 28 in-lbf.	Building products are expected to last a long time, and builders hardware is no exception. Grade 1 locks, for example, must pass a rigorous test through 1,000,000 cycles of opening and closing with a 10 pound load applied.	Locksets are counted on to allow carefree operation to those who are authorized, and ensure a high degree of security from the outside. Fifteen aggressive tests are specified, including a 1,200 in-lbf locked lever torque and two directions of impact.	An additional duty of builders hardware is to be aesthetically attractive and stay that way. Resistance to corrosion, chemicals, abrasion, and sunlight are all considered in an array of finish tests, providing confidence in the architectural metals and coatings.

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 Locksets 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 to product specification is a numbering system for lock function. Please consult A156.13 for the full list; an example provided here:

F04 Entry Lock Latch bolt operated by lever from either side except when outside lever is made inoperative by a stop or mechanical means other than key. When outside lever is locked, latch bolt is retracted by key from outside or by operating inside lever. Auxiliary dead latch.

