

Hardware Highlights

ANSI/BHMA A156.1-2006 American National Standard for Butts and Hinges

Standard ANSI/BHMA A156.1-2006 establishes requirements for lightweight, standard weight, heavy weight and detention hinges. Cycle tests, lateral and vertical wear tests, friction tests, strength tests, finish tests, and material and dimensional requirements are included. For further information, consult the full standard, ANSI/BHMA A156.1 for Butts and Hinges.

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 hinges certified to A156.1 (<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:

MATERIAL	DURABILITY	SAFETY & SECURITY	APPEARANCE
The standard includes a table that lists the required steel gage and number of fasteners for each of the standardized heights. For example, a heavy duty five inch hinge shall be made from steel gage 0.190 + .005 in., and have four screw holes per mortised leaf.	Building products are expected to last a long time, and builders hardware is no exception. Grade 1 hinges, for example, must pass a rigorous test through 2.5 million cycles of opening and closing on a door of a specified weight.	Hinges may be specified with additional safety and security features as needed for the application. The standard defines hospital hinges having sloped barrels, maximum security pins (MSP), and non-removable pins (NRP), among others.	An additional duty of builders hardware is to be aesthetically attractive and stay that way. Resistance to corrosion is evaluated through a salt spray test to ASTM B117 providing confidence in the ongoing appearance of 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 hinges are designed to comply with all applicable requirements. For example, hinges which are acceptable for fire doors are described in NFPA 80.

Detention Hinges A section of the Standard is dedicated to describing the requirements for Detention Hinges, including the test methods of ASTM F1758.

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.

Type Numbers: Another significant contribution of standards for product specification is a numbering system for hinge types. Please consult A156.1 for the full list; an example is provided here:
A2211 A5211 A8211
Half Mortise Hinge - Heavy Weight - Anti-friction Bearing
Equipped with bearing unit(s), button tips, non-rising removable pins. Hinge shall be reversible. Highly polished and plated or phosphatized and primed. Corresponding sizes and gauges as listed in Note A, paragraph 3.9.

