

American National Standards Institute

ANSI standards could be described as the USA's equivalent of our EN standards and are administered and accredited by the American National Standards Institute from whom they take their name. Working together with the Builders' Hardware Manufacturers Association ANSI has developed durability, strength and performance standards for almost every type of builders' hardware. In the same way that the UK operates with EN and BS standards, products must be testified by a recognised test house before they can be listed on the Directory of Certified Products. These ANSI standards cover five major categories: door controls, hanging, locking, trimming, and power assist.

Each test has cycle, functional strength, security, dimension and finish performance requirements and many tests are performed on each product. They may include:

Tension loading	Retraction deadbolt	Bolt strength	Impact/force	Pound exertion	Vertical load test
Deadbolt torque	Warped door	Security			

Products that receive ANSI/BHMA certification are designated as Grade 1, Grade 2 or Grade 3 which offers specifiers a "good, better best" range of options when choosing hardware - with Grade 1 being the highest level of performance for heavy duty applications. But while two different product categories may share Grade 1 status, they may not have been evaluated by the same criteria: the standards for door closers are different from exit devices for example. Grade 2 or Grade 3 products must also pass certain standards tests, but the requirements are less stringent. These products are generally used at a lesser frequency and in less abusive environments.

One major difference between ANSI and EN standards is in the cycle testing. Cycle tests specify how many cycles a product can endure while still maintaining its performance and the result provides an understanding of longevity, performance under wear and tear, operational capacity and security. In general, ANSI standards specify much higher number of cycles to be tested. Door closers for example must complete two million cycles to achieve Grade 1 accreditation, one million for grade 2, and half a million cycles for Grade 3 (which incidentally is the only requirement in BS EN 1154 for door closers in the European market). Some manufacturers have developed products that not only meet, but exceed Grade 1 standards as technology, materials and innovation outstrips the standards themselves. For example, LCN's 4040XP series closer has been independently tested to 10 million cycles—far exceeding the requirements ANSI cycle test standard of 2,000,000 operating cycles.

The ANSI standards which refer to doors closers are:

- ANSI/BHMA A156.4-2013: Door Controls - Closers
- ANSI/BHMA A156.8-2015: Door controls - Overhead Stops and Holders
- ANSI/BHMA A156.15-2015: Closer Holder, Electromagnetic and Electromechanical
- BHMA A156.17-2004 (R2010): Self Closing Hinges and Pivots

At Relcross we sell a comprehensive range of heavy-duty ANSI grade hardware that is specified in high traffic, high impact settings including prisons, hospitals, schools, shopping malls and other public buildings across the UK. ANSI standard products have to be retested to EN standards in order to receive a CE Mark and be placed on the market in the UK. In general this does not pose a problem since quality ANSI approved products generally only ever need a small tweak at best to pass the EN tests.

One of the key difference between an ANSI and EN certified door closer is in the material used in its construction. LCN ANSI-grade closers feature cast iron cylinders and forged steel working components. Cast iron is not only strong, hard and reliable, it is compatible with high-grade steel components and is highly resistant to wear from millions of opening and closing cycles.

ANSI standards are reviewed periodically by ANSI and BHMA and in general change happens at a faster pace than with EN standards. Even so, the market innovation often outstrips these reviews as technology, manufacturing expertise and materials improvements are phased in by manufacturers

As the UK's principal distributor of ANSI standard hardware in the UK, Relcross offers a free technical specification and advisory service to assist you in the correct choice of equipment. We keep substantial stocks of most products. Our team of trained specifiers will discuss problems, offer guidance, make recommendations and, most importantly, help on site if difficulties should occur.

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