

ANSI/BHMA A156.4-2000

Revision of:

ANSI/BHMA A156.4-1992



AMERICAN NATIONAL STANDARD

FOR

DOOR CONTROLS - CLOSERS



SPONSOR

BUILDERS HARDWARE MANUFACTURERS ASSOCIATION, INC.

Approved April 26, 2000

AMERICAN NATIONAL STANDARDS INSTITUTE, INC.

AMERICAN NATIONAL STANDARD

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Published by
BUILDERS HARDWARE MANUFACTURERS ASSOCIATION, INC.
355 Lexington Avenue New York, NY 10017

www.buildershardware.com

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Printed in the USA

This Standard was first published in July 1980 by the Builders Hardware Manufacturers Association, Inc. It was entitled, "Standard 301 BHMA Product Standards Section C, Door Controls (Closers)." ANSI approval was secured under the Canvass Method. BHMA was accredited on 21 March 1983 by ANSI as a sponsor using the Canvass Method.

FORWARD

(This Forward is not a part of ANSI/BHMA A156.4-2000)

The general classification of builders hardware includes a wide variety of items which are divided into several categories. To recognize this diversity, a sectional classification systems has been established. Door Controls is one such section and this Standard is the result of the collective efforts of members of the Builders Hardware Manufacturers Association, Inc., who manufacture this product. The total Product Standards effort is, therefore, a collection of sections, each covering a specific category of items.

Performance tests and, where it has been necessary, dimensional requirements have been established to insure safety, security and stability to which the public is entitled. There are no restrictions on design, except for those dimensional requirements imposed for the reasons given above. It is also required that some hardware items fit certain specified cutout dimensions.

The BHMA recognizes that errors will be found, items will become obsolete, and new products, methods and materials will be developed. With this in mind, the Association plans to update, correct and revise these Standards on a regular basis.

In most cases, products have been described in grade levels related to performance. Grade classifications indicate levels only with their own category. Choice of grade and specific product are made on the basis of utility, aesthetics, security objectives and end use desired.

The BHMA numbers and pictorials which indicate types of hardware do not identify size, finish, material or options and are not intended to be used without necessary supplementary information. Consult individual manufacturer's catalog.

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1. SCOPE

1.1 This Standard contains requirements for door closers surface mounted, concealed in the door, overhead concealed and concealed in the floor. Also included are pivots for floor closers. Criteria for conformance include cycle, operational, closing force and finish tests. Optional tests which shall be specified separately are also included.

1.2 Tests in this Standard are performed under laboratory conditions. In actual usage results vary because of installation, maintenance, and environmental conditions.

1.3 **Use on Fire Doors.** A door closer used on labeled fire door assemblies shall be listed or labeled by a nationally recognized independent testing laboratory, and be subject to a periodic in-plant follow-up service. Consult the authority having jurisdiction for the appropriate fire test requirements.

2. GENERAL

2.1 **Reference to other Standards.** ANSI Standards referenced in this Standard are available from the American National Standards Institute, 11 West 42nd Street, New York, NY 10036.

2.2 **Type Numbers.** This Standard has been prepared to standardize door closers and controls by type requirements and performance levels. Only those type numbers shown in this Standard shall be used. For explanation of identifying numbers, see 11.13.

2.3 **Manufacturer's Catalogs.** Consult manufacturer's catalogs for construction details and special conditions relating to accessories.

2.4 **Tolerances.** All values which do not carry specific tolerances or are not marked maximum or minimum shall have the following tolerances: Number of cycles shall be minimum. Linear dimensions shall be $\pm 1/16$ in. (1.6 mm). Pounds or pound force shall be $\pm 2\%$. The scribed lines for degree of opening shall be ± 2 degrees.

2.5 **SI Units.** All dimensions are expressed first in US units with SI unit (metric) equivalents given in parentheses. SI units are approximate.

3. PERFORMANCE TEST REQUIREMENTS (For a Summary of Test Requirements See Table A2)

3.1 **All Closers.** Door closers shall be categorized as listed in the following groupings by their performance requirements.

3.2 **Fluid.** Fluid used in door closers intended for exterior or vestibule door application shall have a pour point of minus 38 degrees F (-39 degrees C) or lower when tested in accordance with ASTM D-97.

3.3 **Templating.** Test templating shall be in accordance with paragraph 4.2.4.

3.4 **Types to Test.** Non-hold open type closers shall be used for all testing.

3.5 PT 1 - Test for Grade 1 Surface or Concealed in Door Closers

3.5.1 Door shall be under control from 115 degrees of door opening to the closed position (6.1).

3.5.2 Two adjustable closing speeds shall be required for single acting doors. (6.2 and 6.3)