

ANSI/BHMA A156.3 - 2001

Revision of:

ANSI/BHMA A156.3 - 1994



AMERICAN NATIONAL STANDARD

FOR

EXIT DEVICES



SPONSOR

BUILDERS HARDWARE MANUFACTURERS ASSOCIATION, INC.

Approved July 2, 2001

AMERICAN NATIONAL STANDARDS INSTITUTE, INC.

AMERICAN NATIONAL STANDARD

An American National Standard implies a consensus of those substantially concerned with its scope and provisions. An American National Standard is intended as a guide to aid the manufacturer, the consumer and the general public. The existence of an American National Standard does not in any respect preclude anyone, whether they have approved the Standard or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the Standard. American National Standards are subject to periodic review and users are cautioned to obtain the latest editions.

CAUTION NOTICE: This American National Standard is permitted to be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken to reaffirm, revise, or withdraw this standard no later than five years from the date of publication. Purchasers of American National Standards receive current information on all standards by calling or writing The American National Standards Institute.

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

Copyright © 2001 by the Builders Hardware Manufacturers Association, Inc.
www.buildershardware.com

Not to be reproduced without specific authorization from BHMA

Printed in the USA

This Standard was developed by the Builders Hardware Manufacturers Association, Inc. It was approved by ANSI under the Canvass Method. BHMA was accredited on 21 March 1983 as a sponsor using the Canvass Method.

FOREWORD (This Foreword is not a part of ANSI/BHMA A156.3)

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 system has been established. Exit devices 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 these products. The total Product Standards effort is therefore, a collection of sections, each covering a specific category of items.

The BHMA recognized 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 with Grade 1 being the highest rating. Some products described are suitable for use according to conditions and are not graded. Grade classifications indicate levels only within their own product category. Choice of grade and specific product should be made on the basis of utility, aesthetics, security objectives and end use desired.

The BHMA numbers which indicate types and functions of hardware do not identify size, finish, material or design and are not intended to be used without necessary supplementary information.

Users of this Standard are cautioned over the selection of exit devices to be installed on fire doors. Only devices investigated for both fire and panic protection may be used. Labels employed by laboratories listing such devices bear the designation, "Fire Exit Hardware." Other devices, although suitable for many doors within a means of egress, may not be used with fire door assemblies. The fire door must also bear a label containing the phrase, "Fire Door to be equipped with Fire Exit Hardware."

ORDERING INFORMATION

BHMA standards, publications, and matchplates can be ordered at:

www.buildershardware.com - Search entire catalog, order printed or electronic versions, and download electronic versions right to your computer.

Call our Fulfillment Partner, Techstreet, at:
Toll-free (800) 699-9277 (U.S. and Canada)
Ph. (734) 302-7801 Fax (734) 302-7811
E-mail: service@techstreet.com

Send mail to:
BHMA c/o Techstreet
1327 Jones Drive
Ann Arbor, MI 48105 USA

TABLE OF CONTENTS

1.	SCOPE	5
2.	GENERAL	5
3.	TYPES	7
4.	FUNCTIONS	7
5.	AUXILIARY ITEMS	8
6.	TEST METHODS	9
7.	INSIDE OPERATIONAL TESTS	10
7	FLUSH BOLT TESTS	12
8.	OUTSIDE OPERATIONAL TESTS	13
9.	STRENGTH TESTS	14
10.	MATERIAL EVALUATION TESTS	15

1. SCOPE

1.1 This standard establishes requirements for exit devices and trim, automatic and self-latching flush bolts, removable mullions, coordinators, and carry-open bars. Performance criteria include cycle, operational, strength, material evaluation, and finish tests. Functions and types are described and numbered.

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

2. GENERAL

2.1 All exit devices shall be listed or labeled by a Nationally Recognized Testing Laboratory (NRTL) and be subject to periodic examination service.

2.2 Exit devices are available in Grades 1, 2, and 3 with grade 1 being the highest grade. All are suitable for all classes of buildings and are based on the performance tests listed. A Grade 1 exit device shall be furnished with all Grade 1 trim and cylinders, when supplied, in order to retain an overall Grade 1 rating. A Grade 2 exit device shall be furnished with grade 2, or higher, trim and cylinder in order to retain an overall Grade 2 rating; and similarly for Grade 3 rating.

2.3 Door coordinators Type 21A are available in Grade 1 and 2. Door coordinators Type 21B are available in Grade 2. Both Grades are suitable for all classes of buildings and are based on performance tests listed.

2.4 Carry-open bars are available in Grades 1 and 2. Both are suitable for all classes of buildings and are based on the performance test listed. When coordinators are installed with carry-open bars, the Grade of the combination is the lower Grade of either component.

2.5 The cycling requirements listed shall not be considered as being in addition to those required by UL305 but comprise the total required.

2.6 All exit devices shall meet the requirements and performance tests found in Underwriters Laboratories, Inc. Standard UL305 - Panic Hardware, 5th edition, January 31, 1997.

2.7 **Values.** Required values in this Standard are given in US units. The SI (metric) equivalents are approximate. All values which do not carry specific tolerances or are not marked maximum or minimum shall have the following tolerances: Linear dimensions shall be $\pm 1/16$ in (1.6 mm). Pounds or pound force shall be $\pm 5\%$. Angular measurements shall be ± 4 degrees. Voltage measurements shall be ± 5 percent. Temperature measurements shall be ± 4 degrees F (± 2 degrees C).

2.8 Definitions

2.8.1 **Actuating Bar** The activating mechanism of an exit device is located on the egress side of a door and extends at least half the width of the door. The active surface of the actuating bar shall be visually and physically distinct from the rest of the device. Refer to local codes for location and length. Also called cross bar or push pad.

2.8.2 **Automatic Extension Flush Bolt** A flush mounted locking device for the inactive leaf of a pair of doors. When the active leaf is opened, the inactive leaf is capable of being pushed open and when it closes, the bolt latches automatically by the closing of the active leaf and is held latched by the closed active leaf.

2.8.3 **Automatic Latching Two Point Bolts** A surface or concealed mounted top and bottom locking device for the inactive leaf of a pair of doors. It is manually unlocked to open, but when the leaf is closed, the bolts latch automatically.