Proposed revision of BHMA A156.14 – 2013

STANDARD

FOR

SLIDING AND FOLDING DOOR HARDWARE

SPONSOR

BUILDERS HARDWARE MANUFACTURERS ASSOCIATION, INC.

April 4, 2018 Reformatted
Revision E May 3, 2018
Revision F June 4, 2018
Revision G August 2, 2018
Revision H September 12, 2018

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 he has 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CAUTION NOTICE: This American National Standard may be revised or withdrawn at any time.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 may 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, NY 10017

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.

FOREWORD (This Foreword is not a part of ANSI/BHMA A156.14)

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. Sliding and Folding Door Hardware 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 within their own category. Choice of grades and specific products 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 necessarily identify size, finish, or material and are not intended to be used without necessary supplementary information. Individual manufacturer's catalogs are consulted.

TABLE OF CONTENTS

1. SCOPE

1.1 This Standard establishes requirements for Sliding and Folding Door Hardware. Cycle tests, abuse, durability static load, smoothness, static friction, kinetic friction and finish tests are included. Hardware for light to very heavy doors is covered including both residential and industrial applications.

1.2 Fire doors equipped with sliding door hardware shall successfully pass the requirements of ANSI/UL 10B or 10C. ANSI/UL 14B specifies requirements for sliding door hardware used on sliding type fire doors.

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

1.4 All dimensions which do not carry specific tolerances or are not marked maximum or minimum are permitted to have nominal deviations. Dimensions are given in US units. SI unit (metric) equivalents given in parentheses are approximate.

1.5 ANSI Standards referenced in this Standard are available from the BHMA website www.buildershardware.com or the American National Standards Institute, 11 West 42nd Street, New York, NY 10036.

2. DEFINITIONS

2.1 **Aligner** A component added to a 4 door bifold set to keep the leading edge of doors flush when closed.

2.2 **Bow Handle** A pull for use on heavy doors.

2.3 **Bumper Shoe** A protection plate for the bottom edge of a door where it hits a stop.

2.4 **Cane Bolt** An L shaped rod held by guides which fixes a door in a closed or open position.

2.5 **Chain Bolt** See Spring Bolt.

2.6 **Cremone Bolt** Rods held by guides and controlled by a knob or lever. The rods project into members above and below a door.

2.7 **Edge Pull** A pull inserted into the edge of a sliding door.

2.8 **Flush Pull** A pull mortised into the face of a door.

2.9 **Foot Bolt** A bolt projected with one's foot and released against a spring loaded trigger mechanism. Fixes a door in a closed or open position.

2.10 **Guide** A device used to control lateral movement of a sliding door.

2.11 **Hanger** Rollers with a connection to a door which suspend the door and allow it to travel in a track.

2.12 **Heavy Sliding Door** In this Standard, heavy sliding doors are intended to include those weighing 240 lbs (109 kg) and above, and generally used for industrial applications.

2.13 **Sliding Door Lock or Latch** A lock or latch inserted into the edge of a sliding door to lock or latch into the adjacent frame.

2.14 **Snugger** A device installed in a track to keep doors in a closed position.

2.15 **Spring Bolt** A self latching bolt retracted by a chain and used on swinging doors (also called Chain Bolt).

2.16 **Stay Roller** A roller used to control lateral movement of a sliding door.

2.17 **Stop** A device used to limit the travel of a sliding door.

2.18 **Surface Pull** A pull applied to the face of the door.

2.19 **Track** A member containing the hangers and supporting the weight of the door (also called rail).

2.20 **Track Support** Brackets used to hold and fasten the track to the structure above or below the door (also called rail support).

3. TEST PROCEDURES

3.1 **Purpose** Tests are established to determine the smoothness of operation, force required to overcome static friction, durability of the hardware and the ability to maintain adjustments.

3.2 **Necessary Equipment for Performance Testing** Provide appropriate height doors for a standard 6 ft 8 in (2032 mm) high opening a maximum width for which the hardware is recommended in a prepared opening (see 3.3), the hardware to be tested, an accurate scale, hand tools as required, door weights, actuators for operating doors (see Figures 1 through 5), force gages, and a cycle counter.

3.3 **Preparing the Opening**

3.3.1 Provide a structurally sound finished opening to the sizes specified by the manufacturer of the hardware to be tested. Brace opening to prevent any movement.

3.3.2 The jambs of this opening shall be plumb and parallel and at right angles to the header. Where applicable, the threshold or bottom track shall be level so as not to interfere with the operation of the doors.

3.3.3 The header shall be suitable for the door widths.

3.3.4 The header shall be straight and level within 3/32 in (2.4 mm).

3.4 **Preparing the Doors** Place the doors on the scale one at a time and add enough weight to each door to make its total weight equal to the rating of the hardware. The weights shall be added to locate the center of gravity at the geometrical center of the rectangular door. The weights shall be firmly attached to the doors to prevent their movement as doors open and close. It is permitted to seal and finish doors and frames to minimize warping.

3.5 **Mounting the Hardware**

3.5.1 At random, select hardware from stock.

3.5.2 Install the bifold set in the opening, according to the manufacturer's instruction sheet, using the fasteners furnished with the hardware.

3.5.3 Mount the hinges, pivots and guides to the doors, as per the instruction sheet, with the fasteners supplied.

3.5.4 Hardware and doors shall be adjusted so that all adjustable or spring loaded top and bottom pivot hardware is at the manufacturer's fully extended position(s). Mark or measure track pivot locations.

3.5.5 Remove the doors and accurately measure the lower pivot extension (if adjustable) and mark the pin in such a way that any vertical movement is apparent.

3.5.6 Install the aligner(s) or snugger(s) in the position specified by the manufacturer, if supplied.

3.5.7 Do not add any lubricants to the hardware unless specified by the manufacturer. Lubricants that have been applied during manufacturing as standard procedure are permissible. Lubricants shall not be added during the test.

3.6 **Mounting the Hardware** (Multiple Folding Types, Bypassing Types and Pocket Types, see Figures 3, 4 & 5).

3.6.1 At random, select hardware from stock.

3.6.2 Install the track(s) in the opening, according to the manufacturer's instruction sheet, using the fasteners furnished with the hardware.

3.6.3 Mount the hangers with the fasteners supplied according to the manufacturer's instruction sheet.

3.6.4 Install door(s) and door guide in the opening with the faces and edges of doors plumb.

3.6.5 Install the bumper(s), aligner(s), or snugger(s) or a combination thereof, according to the manufacturer's instruction sheet.

3.6.6 Mark a point 34 1/2 in (876 mm) from bottom of door(s) on both vertical edges of each folding door to be tested. Mark a point on each side of the frame horizontal to the marks on the doors.

3.6.7 Do not add any lubricants to the hardware, including guides, unless specified by the manufacturer. Lubricants that have been applied during manufacture as standard procedure are permissible. Lubricants shall not be added during the test.

3.6.8 **Tolerances** All values which do not carry specific tolerances or are not marked maximum or minimum shall have the following tolerances: Linear dimensions shall be ± 1/16 in (1.6 mm). Pounds or pound force shall be ± 2%. Degrees shall be ± 2 degrees.

3.6.9 **Measuring Equipment** All instruments and equipment used in the conduct of tests for recording data need to be calibrated and maintained for effectiveness and continued accuracy. Calibration of equipment shall be traceable to National Institute of Standards and Technology (NIST). The frequency of calibration depends on the recommendation of the particular test equipment manufacturer with a minimum being once per year. Measuring equipment used shall have a known measurement error and be capable of qualifying the value being measured.

4. HEAVY SLIDING DOORS 240 pounds and above; By-pass, Telescopic and Pocket Types

4.1 **Static Load Test** The track shall be installed with the supports spaced along the track at the manufacturer's recommended spacing. The Static Load Test shall consist of two tests, one with a hanger located midway between two supports and the other with a hanger located directly under a support. Subject the hangers, track, and supports to a static load equal to two times their maximum rated capacity.

Requirements

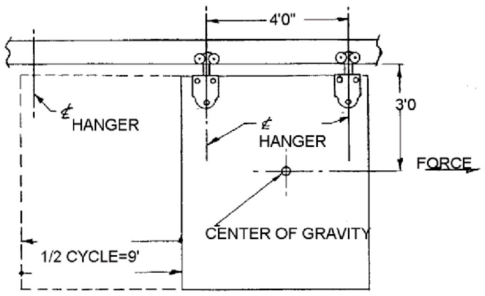
Permanent deformation shall not exceed 0.062 in (1.6 mm)

4.2 **Static Friction Test** At random, select hardware from stock. The track shall be installed in accordance with the manufacturer's instruction sheet. Hanger spacing, point of force application, center of gravity, and cycle distance shall be in accordance with Figure 1. Using a force gauge placed at 34 ½ in. (876 mm) from the bottom of the door, push or pull the door on its track and record the maximum force to start the door moving when hangers are located midway between the track supports. The average of three trials in each direction shall be the static friction.

Requirements

Maximum force shall be 5% of the door panel weight being tested.

4.3 **Durability Test**

4.3.1 At random, select hardware from stock and apply it to test setup as shown in Figure 1. Door shall automatically traverse the test track at a speed not to exceed 50 feet (15 m) per minute. One cycle consists of operating the door(s) from the fully closed position to the fully open position to the fully closed position covering a distance of 18 feet. Track, hangers and supports shall be installed in accordance with the manufacturer's instruction sheet. Throughout the durability test, all parts shall remain operational and not require any adjustment. Hardware shall satisfy the requirements in 4.2 at completion of required number of cycles.	

Requirements

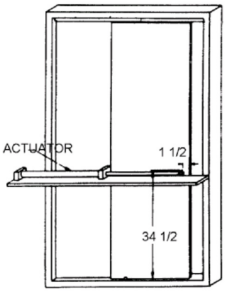
Grade 1	Grade 2
25,000 cycles [450,000 feet (137,160 m)]	12,500 cycles [225,000 feet (68,580 m)].

5. SLIDING DOORS Below 240 pounds; By-pass, Telescopic and Pocket Types

Note 1: Track of aluminum. Header if supplied to be steel, wood or aluminum. All wrought steel hardware to be protected by a corrosion resistant finish. Hangers to provide means of adjustment. Bumper for rear edge of door to be provided. A means of providing both a nailing base and stiffness for the walls is to be provided by either vertical or horizontal stiffeners and need not have a corrosion resistant finish.

Note 2: Track of steel or aluminum. All wrought steel hardware shall have a corrosion resistant finish. Hangers shall provide means of vertical adjustment. Bumper for rear edge of door and a non-abrasive bottom door guide shall be provided.

5.1 **Operation Test for Smoothness**

5.1.1 Install a screw eye mark at a spot the manufacturer recommends for location of a knob or pull. 5.1.2 Open the doors. Using the force gauge hooked in the screw eye, push or pull the door as slowly as possible until the forward edge of the lead door is within two inches of the fully closed position. Note the maximum force required. 5.1.3 Still using the force gauge, slowly urge the door to the open position. Note the maximum force required.	

Requirements

The doors shall glide smoothly with no discernible "Stop- Go" action or chatter. The force gauge reading

shall not vary more than 2% of the door weight while the door is in motion in either direction.

[new] Static Load Test The track shall be installed with the supports spaced along the track at the manufacturer's recommended spacing. The Static Load Test shall consist of two tests, one with a hanger located midway between two supports and the other with a hanger located directly under a support. Subject the hangers, track, and supports to a static load equal to two times their maximum rated capacity.

Requirements

Permanent deformation shall not exceed 0.062 in (1.6 mm)

5.2 **Static Friction Test**

5.2.1 At random, select hardware from stock. The track shall be installed in accordance with the manufacturer's instruction sheet. Hanger spacing, point of force application, center of gravity, and cycle distance shall be in accordance with Figure 5. Using a force gauge placed at 34 ½ in. (876 mm) from the bottom of the door, push or pull the door on its track and record the maximum force to start the door moving when hangers are located midway between the track supports. The average of three trials in each direction shall be the static friction.

Requirements

Maximum force shall be 5% of the door panel weight being tested.

5.3 **Kinetic Friction Test**

5.3.1 Utilize the same setup used in Static Friction Test, 5.2.

5.3.2 Gently nudge one door to start it rolling. Using force gauge at the 34 1/2 in. (876 mm) marking, determine the minimum number of pounds required to keep it rolling.

5.3.3 Repeat on the same door in the opposite direction.

5.3.4 Repeat on the second door (if applicable).

Requirements

Maximum force shall be 5% of the door panel weight being tested.

5.4 **Durability Test**

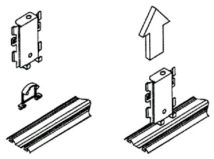
5.4.1 Attach door actuator in such a manner that it will completely open and close the door at least 5, but not more than 7, times per minute, with a maximum dwell of two seconds at the open and closed positions. The actuator without applying additional loads, shall engage the door at a point 34 1/2 in (876 mm) from the bottom of the door and 1 1/2 in (38 mm) from the edge.

5.4.2 One cycle consists of from closed to open to closed positions. Doors shall be no more than 1/8 in (3 mm) out of alignment with their respective jambs. Any deformation of track or hangers shall be slight enough so as not to allow unintentional disengagement between the hangers and track. There shall be no hardware contact other than wheel to track and door to guide contact. Repeat Friction Tests 5.2 and 5.3 after the Durability Test has been run.

Requirements

Grade 1	Grade 2
100,000 cycles	35,000 cycles

5.5 **Abuse Tests**

5.5.1 **Jump Resistant Test** Sliding doors equipped with snap-in type hardware shall be tested in tracks. Perform test by applying the load to the center of the test specimen.	

Shall withstand direct pullout force greater than a 25 lbf (112 N) per roller or guide.

5.5.2 **Mirror Impact Tests** Mirrored sliding and bifold doors shall be supplied with safety backing and tested in accordance with the ANSI Z97.1-2004 for Safety Glazing Materials used in Buildings - Safety Performance Specifications and Methods of Test.

5.5.3 **Bottom Channel Crushing Test** When a bottom channel is used, apply a 200 lbf (889 N) on a 3 ½ in (89 mm) wide wood block. After 15 minutes +- 30 seconds at the specified load, remove the load.

Requirements

After removal of the force, doors shall meet static test 5.2.

5.5.4 **Bottom Track Deflection Test** When a bottom track is used, mount bottom track to a level, wood surface equal to or greater than the width of the bottom track using standard fasteners. Using the manufacturer's hardware (i.e roller), designed for use with the bottom track, fitted to a compression tester, gradually apply a downward compressive load centered in the width of the bottom track within 20 seconds +- 5 seconds until a reading of 200 lbf (889 N) is reached. After 15 minutes +- 30 seconds at the specified load, remove the load.

Requirements

After removal of the force, doors shall meet static test 5.2.

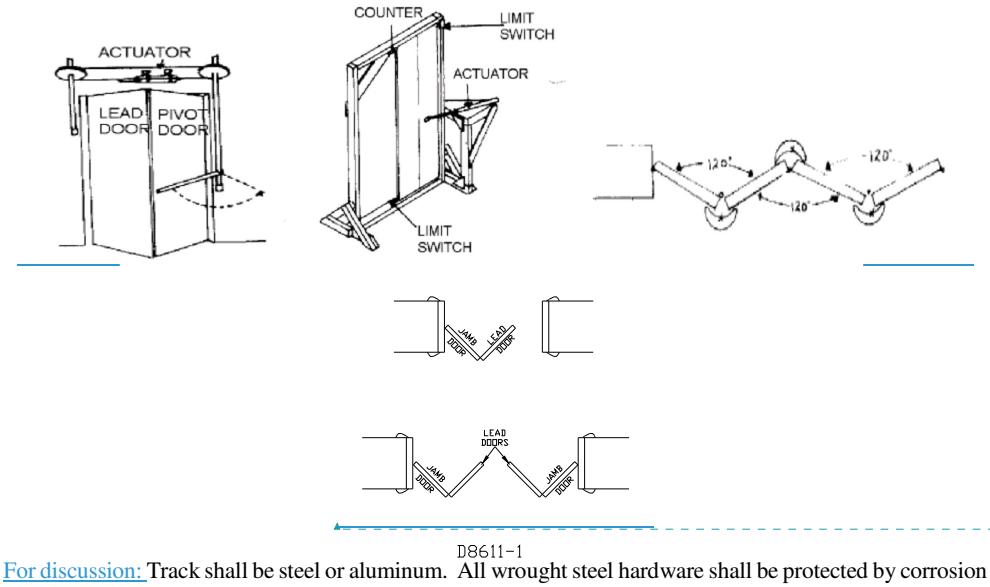
5.5.5 **In-Track Stop Static ~~Impact~~ Test** If in-track stops are used, position door against ~~3 ft away from~~ stop. Apply a 50 lbf force at a height of 34 ½ from the bottom of the trailing edge of the door.

Requirements

In-track stop shall not be displaced more than 1/8 in.

Formatted: Font color: Red
Formatted: Font color: Red
Formatted: Font color: Red
Formatted: Font color: Red
Formatted: Font color: Red
Formatted: Font color: Red
Formatted: Font: Bold, Font color: Red
Formatted: Font: (Default) Times New Roman, Bold, Font color: Red
Formatted: Not Strikethrough
Formatted: Not Strikethrough
Formatted: Body Text, Space After: 0 pt

6. FOLDING DOORS



D8611-1

Field Code Changed

For discussion: Track shall be steel or aluminum. All wrought steel hardware shall be protected by corrosion resistant finish. Door aligners shall be provided. Hardware shall allow horizontal and vertical adjustment. All sets shall be packed complete with hinges and fasteners as required.

6.1 Operation Test for Smoothness

6.1.1 Install a screw eye mark at a spot the manufacturer recommends for location of a knob or pull.

6.1.2 Open the doors. Using the force gauge hooked in the screw eye, push or pull the door as slowly as possible until the forward edge of the lead door is within two inches of the fully closed position. Note the maximum force required.

6.1.3 Still using the force gauge, slowly urge the door to the open position. Note the maximum force required.

Requirements

The doors shall glide smoothly with no discernible "Stop- Go" action or chatter. The force gauge reading shall not vary more than 2% of the door weight while the door is in motion in either direction.

6.2 Static Friction Test

6.2.1 Use the same setup as in Smoothness Test, 6.1.

6.2.2 With the door fully closed, use the force gage in the screw eye, to open the door two inches. With the door fully open, use the force gage in the screw eye, to close the door two inches. Record the maximum force required in each direction.

Requirements

Maximum force shall be 10% of the sum of the door weights being tested.

6.3 **Kinetic Friction Test**

6.3.1 Use same setup as in Smoothness Test 6.1.

6.3.2 Open and close the doors with force gauge in the screw eye, noting the maximum force required to maintain door movement, until the forward edge of lead door is within 2 in (51 mm) of the fully closed and open position.

Requirements

Maximum force shall be 10% of the sum of the door weights being tested.

6.4 **Durability Test for Bifold Doors**

6.4.1 Attach a mechanical device in such a manner that it will open pivot door within 2 in (51 mm) of fully the open position and fully close the doors at least 5 but not more than 7 times per minute. The actuator, without applying additional force, shall attach to or engage with the doors at the point the manufacturer recommends for location of knob or pull. One cycle consists of from closed to open to closed position. Any deformation of track or hanger assembly shall not allow unintentional disengagement between the hangers and the track. Repeat tests 6.1, 6.2, and 6.3 after Durability Test has been run.

Requirements

Grade 1	Grades 2~~ & 3~~
75,000 cycles	25,000 cycles

6.5 **Durability Test for Multiple Fold Doors**

For Discussion: Track steel or aluminum. All wrought steel hardware shall be protected by a corrosion resistant finish. No hinges, locks or pulls included and shall be specified separately. Hardware shall be top and bottom mounted. Guides shall be load bearing and roller or wheel type. Bifold configurations for rated door weight above 125 lbs shall be tested per the requirements of multiple folding door hardware.

6.5.1 Use the four door setup. The fully closed position shall be as shown in Figure 4, with the angle between any two adjacent door panels between 115 degrees and 120 degrees.

6.5.2 The actuator stroke shall be limited to prevent undue lateral loads on the hardware when all 120 degrees restricting means are in effective positions. Door systems~~Cycles~~ shall be run not less than 1 cycle or more than 2 cycles per minute.

6.5.3 One cycle consists of operating the door(s) from the fully closed position to the fully open position to the fully closed position. Any deformation of track and hanger assembly shall not allow unintentional disengagement between the hangers and track. Repeat tests 6.1, 6.2, and 6.3 after Durability Test has been run.

Requirements

Grade 1 HD	Grade 1	Grade 2
45,000 cycles	15,000 cycles	7,500 cycles

6.6 **Ability to Maintain Adjustments Test**

6.6.1 Measure the extension of the lower pivot of the doors just cycled and check the marking (See 3.5.5). Note any changes.

6.6.2 Inspect the track pivot for any movement.

Requirements

The lower pivot shall not have moved during the test. The track pivot retainer shall not have moved.

6.6.3 For hardware featuring vertical adjustment, measure the vertical distance between the marks made in 3.6.6.

Requirements

The vertical displacement of any adjacent mark shall not exceed 0.105 in [2.67 mm]

6.7 **Abuse Tests**

6.7.1 **Mirror Impact Tests** Mirrored sliding and bifold doors shall be supplied with safety backing and tested in accordance with the ANSI Z97.1-2004 for Safety Glazing Materials used in Buildings - Safety Performance Specifications and Methods of Test.

6.7.2 **Bottom Channel Crushing Test** When a bottom channel is used, apply a 200 lbf (889 N) on a 3 1/2 in (89 mm) wide wood block. After 15 minutes +- 30 seconds at the specified load, remove the load. This test is not applicable if the bottom channel is recessed to a flush or sub-flush condition if specified by the manufacturer.

Requirements

After removal of the force, doors shall meet static test 6.2.

7. FINISH TESTS (APPLICABLE TO ALL DOOR TYPES)

7.1 These requirements do not predict the performance life of the finishes in actual use but are used as a quality control method to ensure consistent finish quality.

7.2 **Salt Spray Test** This test shall be conducted in accordance with ANSI/BHMA A156.18-2016 for Materials and Finishes.

Requirements

12 Hours: Types depicted in 8.7, 8.8, 8.9, 8.10, and D8771 as shown in 8.11
24 Hours: Types depicted in 8.1, 8.~~17~~.2, 8.3, 8.4, 8.5, 8.6, and D0821, D0831, D0841 as shown in 8.11

7.3 **Perspiration Test** This test shall be conducted in accordance with ANSI/BHMA A156.18-2016.

Requirements

One cycle: Applicable only to accessory items D0781, D1791, D2801, D0821, D0831, D0841 as shown in 8.11

7.4 **Acceptability of Finish** A finish sample shall be considered acceptable if it meets or exceeds the performance requirements.

8. EXPLANATION OF IDENTIFYING TYPE NUMBERS

8.1 First letter denotes BHMA Product Section (D).

8.2 First numeral indicates the predominant material used: 0 - Optional material

8.3 The second numeral indicates the product type:
1 – Heavy Sliding Doors
2 – Sliding Doors
3 – Bi -Fold Doors
4 – Multiple Fold Doors

8.4 The third and fourth numerals identify the type of System - assigned on a sequential basis so that no two type numbers would be the same. See Table 1 below.

8.5 The last numeral designates the grade classification of the item:
1 – Grade 1
1HD – Grade 1 Heavy Duty
2 – Grade 2

8.6 The suffix number i.e. -200 indicates door panel weight in five pound increments

TABLE 1
Third and Fourth Numerals

Sliding Doors
Includes Barn (HW), Interior Office (HW) , Pocket, By-pass and Telescopic Systems

Slider -Sidewall	11	sidewall mounted straight sliding system -single door
	12	sidewall mounted straight sliding system - double
	13	sidewall mounted straight sliding system - triple
Slider - Overhead	21	overhead mounted straight sliding system - single door
	22	overhead mounted straight sliding system -double
	23	overhead mounted straight sliding system - triple
Slider - pocket	31	pocket sliding- Single door with frame
	32	pocket sliding- Single door with no frame
	33	pocket sliding- Bi parting doors with frame
	34	pocket sliding- Bi parting doors with no frame
Slider By-pass - overhead	41	overhead mounted bypass system
	42	overhead mounted bypass system - with mirror panel
	43	overhead mounted bypass system - with other than mirror panel
Slider By-pass - bottom	51	bottom roller bypass system
	52	bottom roller bypass system - mirror panel
	53	bottom roller bypass system - with other than mirror panel

Slider - Telescopic	61	overhead mounted Telescopic system
	62	bottom mounted Telescopic system
	63	sidewall mounted Telescopic system
Folding Doors Includes Bi-Fold and Multiple Folding systems		
Bi fold surface	71	surface mounted Bi folding system- with door frame and mirror
	72	surface mounted Bi folding system- with no door frame and mirror
	73	surface mounted Bi folding system- with door frame and other than mirror panel
	74	surface mounted Bi folding system- with no door frame and other than mirror panel
Bi Fold top/bottom		
	81	top and bottom mounted Bi folding system- with door frame and mirror
	82	top and bottom mounted Bi folding system- with no door frame and mirror
	83	top and bottom mounted Bi folding system- with door frame and other than mirror panel
	84	top and bottom mounted Bi folding system- with no door frame and other than mirror panel
Multiple folding	91	Multiple Folding system -Multiple doors by access door. Access door may be at either side.
	92	Multiple Folding system -Multiple doors. Doors open to right and left in pairs or multiples of pairs.
	93	Multiple Folding system -Multiple doors opening in one direction either right or left.

APPENDIX A (NOT A PART OF A156.14)

A-1 Certification that products meet requirements of this Standard and conform to individual manufacturers' drawings, specifications, standards and quality assurance practices are available and sometimes required. Buyer requirements determine the need for proof of conformance such as first article inspection, test laboratory reports or listings. Specifiers requiring assertions of conformance utilize statements of conformance by individual manufacturers, or test reports acceptable to the buyer. Note: This standard is not intended to apply to elevator doors.

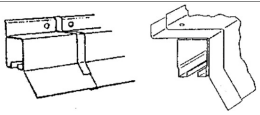
A-2 Unless other arrangements between buyer and seller are made, preservation, packaging and packing shall be sufficient to protect containers and their contents under normal shipping and handling conditions from the source of supply to the destination point.

A-3 Unless other arrangements between buyer and seller are made, marking shall be in accordance with the individual manufacturer's standard practice.

APPENDIX B (NOT PART OF A156.14)

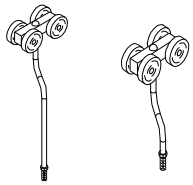
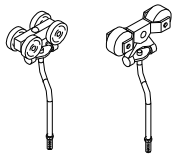
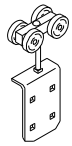
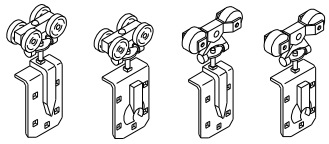
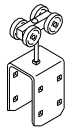
In the 2019 edition of A156.14 a new Type Numbering System was developed and is now found in Section 8. The following material showing the previous numbering method is provided for information only and is considered obsolete.

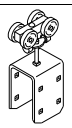
Typical Box Track

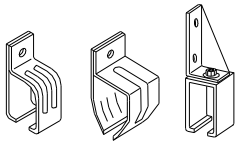
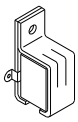
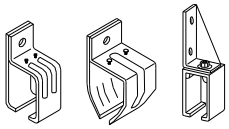
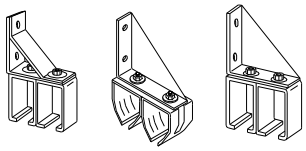
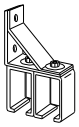
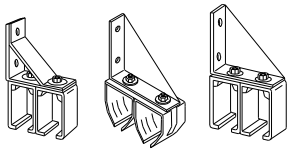
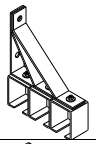
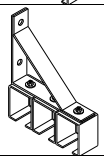
D8921 Without Mounting Brackets	
D8931 With Attached Mounting Brackets	
D8941 With Attached Flashing	
D8951 Curved Track	

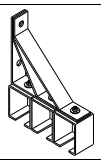
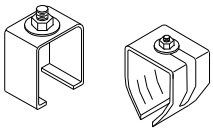
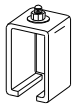
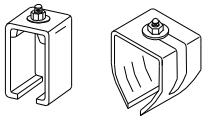
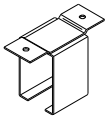
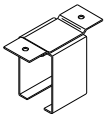
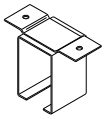
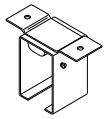
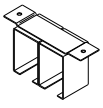
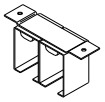
Typical Round Track

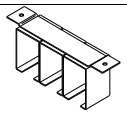
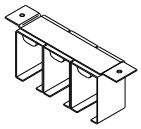
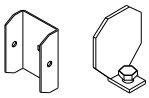
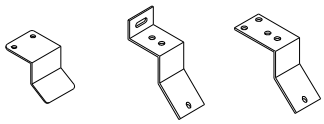
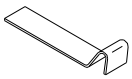
D8961 Without Mounting Brackets	
D8971 With Attached Mounting Brackets	

Typical Door Hangers for Box and Round Track	
D8981 Truck Only	
D8131 Hanger with top mounting plate, has vertical adjustment	
D8991 Hanger with drop bolt, has vertical adjustment	
D81001 Hanger with drop bolt, has vertical and lateral adjustments	
D81011 Hanger with swing out feature drop bolt, has vertical adjustment	
D81021 Hanger with swing out feature drop bolt, has vertical and lateral adjustments	
D81031 Hanger with single drop strap, has vertical and lateral adjustments	
D81041 Hanger with swing out feature and single drop strap, has vertical and lateral adjustments	
D8151 Hanger with double drop straps, has vertical and lateral adjustments	

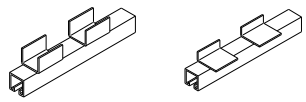
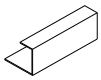
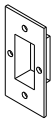
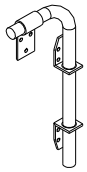
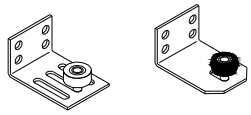
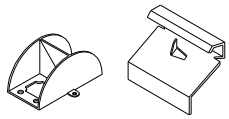
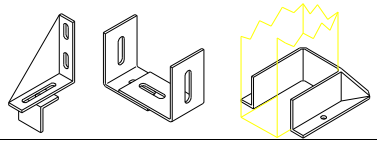
D8171 Hanger with swing out feature and double drop straps, has vertical and lateral adjustments	
D81051 Hanger with eye bolt	
D81061 Hanger with ball bearing race under bolt head for curved track	

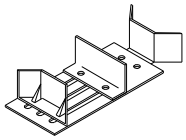
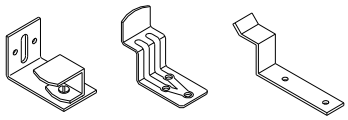
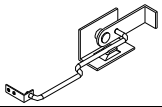
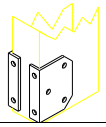
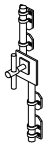
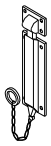
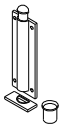
Track Supports, Styles and Types, for Box and Round Track	
D8181 Single side wall style, intermediate type	
D8191 Single side wall style, end type	
D8201 Single side wall style, splice type	
D8211 Double side wall style, intermediate type	
D8221 Double side wall style, end type	
D8231 Double side wall style, splice type	
D8241 Triple side wall style, intermediate type	
D8521 Triple sidewall style, end type	

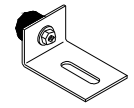
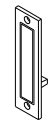
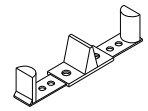
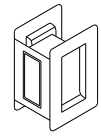
D8261 Triple sidewall style, splice type	
D8271 Single overhead style, intermediate type	
D8281 Single overhead style, end type	
D8291 Single overhead style, splice type	
D8301 Single overhead parallel style, intermediate type	
D8321 Single overhead parallel style, splice type	
D8331 Single overhead cross ear style, intermediate type	
D8351 Single overhead cross ear style, splice type	
D8361 Double overhead style, intermediate type	
D8381 Double overhead style, splice type	

D8391 Triple overhead style, intermediate type	
D8411 Triple overhead style, splice type	
D81071 Typical round track splice collar	
D81081 Typical track end caps	
D81091 Typical flashing brackets	
D81101 Typical jamb door stop	

Accessory Items for Horizontal Sliding Door Installations

D81111 Continuous bottom guide for 1 1/2 in (38 mm) thick door frames; and for 3 1/2 in (89 mm) thick door frames	
D81121 Guide track	
D81131 Guide track bracket	
D8421 Bow Handle, 6 1/2 in (165 mm) overall minimum	
D8431 Flush Pull, 4 x 5 7/8 x 3/4 inch depth mortise minimum (100 x 150 x 19 mm)	
D8441 Cane Bolt, 1/2 inch in diameter x 12 in overall minimum (12.7 x 305 mm)	
D8451 Stay Roller, 2 in (51 mm) diameter wheel minimum	
D7461 Floor Center Stop, for doors up to 3 in (76 mm) thick	
D8471 End Guide and Stop, for doors up to 4 in (100 mm) thick	

D8481 Parallel Door Floor Guides, for 2 parallel doors 1 3/4 to 3 in (44 to 76 mm) thick, adjustable	
D8491 Door Stop, size varies according to door thickness and weight	
D81141 Sliding door latch	
D8501 Bumper Shoe, 3 1/2 x 3 1/2 x 5/8 in lip (89 x 89 x 16 mm) x 16 gauge	
D8511 Cremone Bolt, lever handle with half oval or round rod. Guides for every 2 feet (610 mm) of rod. Rod 1/2 in (12.7 mm) cross section minimum.	
D6521-D8522 Top Spring Bolt, 6 in (152 mm) overall minimum, 24 in (610 mm) chain, angle or surface strike (Also called chain bolt).	
D6531-D8532 Top Spring Bolt, 8 in (203 mm) overall minimum, 24 in (610 mm) chain, angle or surface strike (Also called chain bolt).	no illustration
D6541-D8542 Foot Bolt, 6 inch (152 mm) overall minimum	
D6551-D8552 Foot Bolt, 8 inch (203 mm) overall minimum	no illustration

Accessory Items	
D8771 Bumper Stop for bi-passing doors. Intended to prevent finger pinching and knuckle skinning. Shall be protected by a corrosion resistant finish.	
D0781 Flush Pull. Design and shape optional. Shall be mortised in doors.	
D1791 Surface Pull. Surface applied. Design optional.	
D2801 Edge Pull. Mortised. Shall allow door to fit entirely within pocket. Design optional.	
D0811 Floor Guide. See individual manufacturer's catalogs. (no tests required)	
D0821 Sliding Door Latch. No locking feature. Adjustable for 1 3/8 in to 1 3/4 in (35 to 45 mm). Lock and pull edges shall be within 1/16 in (1.6 mm) of being flush with door when applied.	
D0831 Sliding Door Lock. Has locking feature with emergency release allowing lock to be unlocked by screwdriver or special key or tool supplied by the manufacturer. Otherwise same as D0821	no illustration
D0841 Pocket Sliding Door Bolt. Bolt mortised into face of door, strike mounted on face of pocket jamb. Extended lever blocks closed door from being pushed back into pocket. Has emergency release.	no illustration