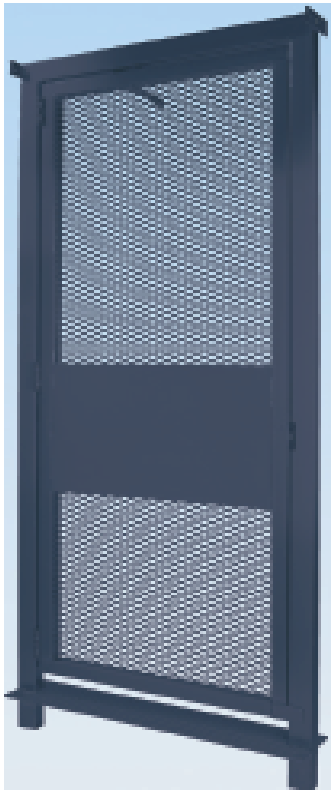
TURNSTILES.us.™

SECURING THE U.S. and the GLOBE

HS336 Series Full Height ADA Gate

Service & Installation Manual



Important Note: Please keep this service manual after installation. If an installation is done by a construction company or outside installer, please pass this book along to the end user.

Note: Successful installation depends on reading this manual.

The High-Security Series

Manual or Electronic Passage Gate • Interior & Exterior Application

HS336-ADA

The Truly "Custom" ADA Gate

Our HS336-ADA is our ADA solution to perimeter security. This self-closing, heavy duty swing gate provides a wheelchair accessible 36" passage width (with an overall width of 43"). Its low voltage strike lock can be used mechanically or electronically depending on your needs. It is available in all of our standard finishes including stainless steel (304 or 316), carbon steel with powder coating, or hot-dipped galvanized, to match our turnstiles perfectly. Your choice of standard vertical bars or reach prevention mesh allows for a custom experience. A treadplate walkway adds additional rigidity and helps in preventing installation mishaps.

Hydraulic door closer included with gate. Power Door Opener is available for additional charge.

Full exit push-bar, guard and mesh should be used for Free Exit situations.
Push-bar not available without mesh.

HS336 (stainless steel)

**All models available in stainless steel, powder coat or galvanized.*

HS336 - Front (powder coat with mesh)

HS336 - Back (stainless steel with mesh)

We're the #1 Choice of Top Architects, Security Pros and Engineers

For two decades, Controlled Access has been the globally trusted name in pedestrian control equipment. Made in Ohio and shipped worldwide, we are the first choice of leading architects, facility managers, security consultants and engineers. Whether your project requires high security full-height turnstiles, waist-high units, or matching ADA accessible gates, Controlled Access is the secure choice. And, we're experienced in access control systems, from card readers to biometric scanning, to give you the power to control access.

Built in the USA

The High-Security Series

Manual or Electronic Passage Gate • Interior & Exterior Application

HS336-ADA

Applications:

Ideal for controlling orderly flow of foot traffic in both indoor and outdoor settings (matching gate to our High-Security Full-Height Single and Tandem Turnstiles)

Product Features:

Materials and Finishes available in your choice of:

- Hot dipped galvanized carbon steel
- Carbon steel with powder coating (standard color is black/ other colors available upon request)
- Our signature 304 Stainless steel/ No. 4 satin finish

Design & Construction:

- Designed for secure operation with asthetics in mind
- Featuring fully welded exterior components
- Minimal exposed hardware
- Heavy gauge materials meeting ASTM standards

Installation Methods:

- Core drilling of frame posts (preferred)
- 1/2" concrete anchors from tread plate (requires removing core legs from frame)

Operation:

- Field reversable electronic strike (24VDC) can be set to lock or open on power failure
- Gate can also be unlocked with no power by configuring the strike to fail lock and using a key
- Gate automatically swings closed with standard hydraulic door closer
- Voltage for electronic strike can be taken from nearby turnstile power supply

Options:

- Reach prevention mesh
- Panic bar with mesh for free exit
- Magnetic lock (replaces strike)
- Motorized gate opener (requires 110VAC, adds 3" to overall height of gate)
- Push buttons (Wired or wireless)
- Variable passage widths (up to 40")
- Additional options available upon request

Measures:

HS336-ADA

Size of opening (pedestrian clearance)
HS336-ADA 36" (914mm)
Frame
2" x 3" (51mm x 76.2mm) 11 gauge box tubing
Swing Gate
2" x 2" (51mm x 51mm) 11 gauge box tubing
Exterior Height
91" (2331mm)
Interior Height
87.872" (2230mm)
Available Door Filler Materials
1 1/2" Diameter 14 gauge (38mm)
1 3/4" Diameter 14 gauge (44mm)
3/4" #9 Expanded Metal Mesh (Flattened)

Standard Hardware:

Door Closer:
Norton 9300 Series with Aluminum Finish
Deadlock:
Adams Rite 4510 Series with 31/32" Backset
Strike:
Adams Rite 7100 Series Electronic Strike, 24VDC
Cylinder:
Schlage C keyway - standard
SFIC available

Optional Hardware:

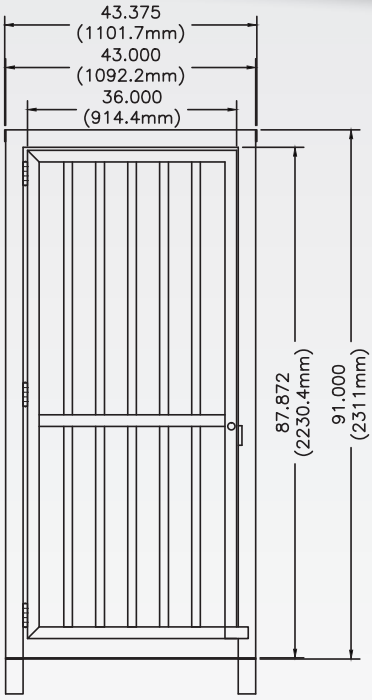
Door Opener:
Norton 5730 Low Energy Operator, Aluminum
Push to Exit Panic Bar:
Adams Rite 8400 Exit Device, Aluminum

We can source additional custom hardware choices. Please provide your required specs for a quotation.

Matching Full-Height Turnstiles Available in Single (HS427-S, HS430-S, HS439-S, HS448-S) and Tandem (HS427-T, HS430-T) Designs.

Warranty:

Units are warranted against defects in materials and workmanship for a period of one year from date of delivery. See warranty information for specific details.



Dimensions are approximate.

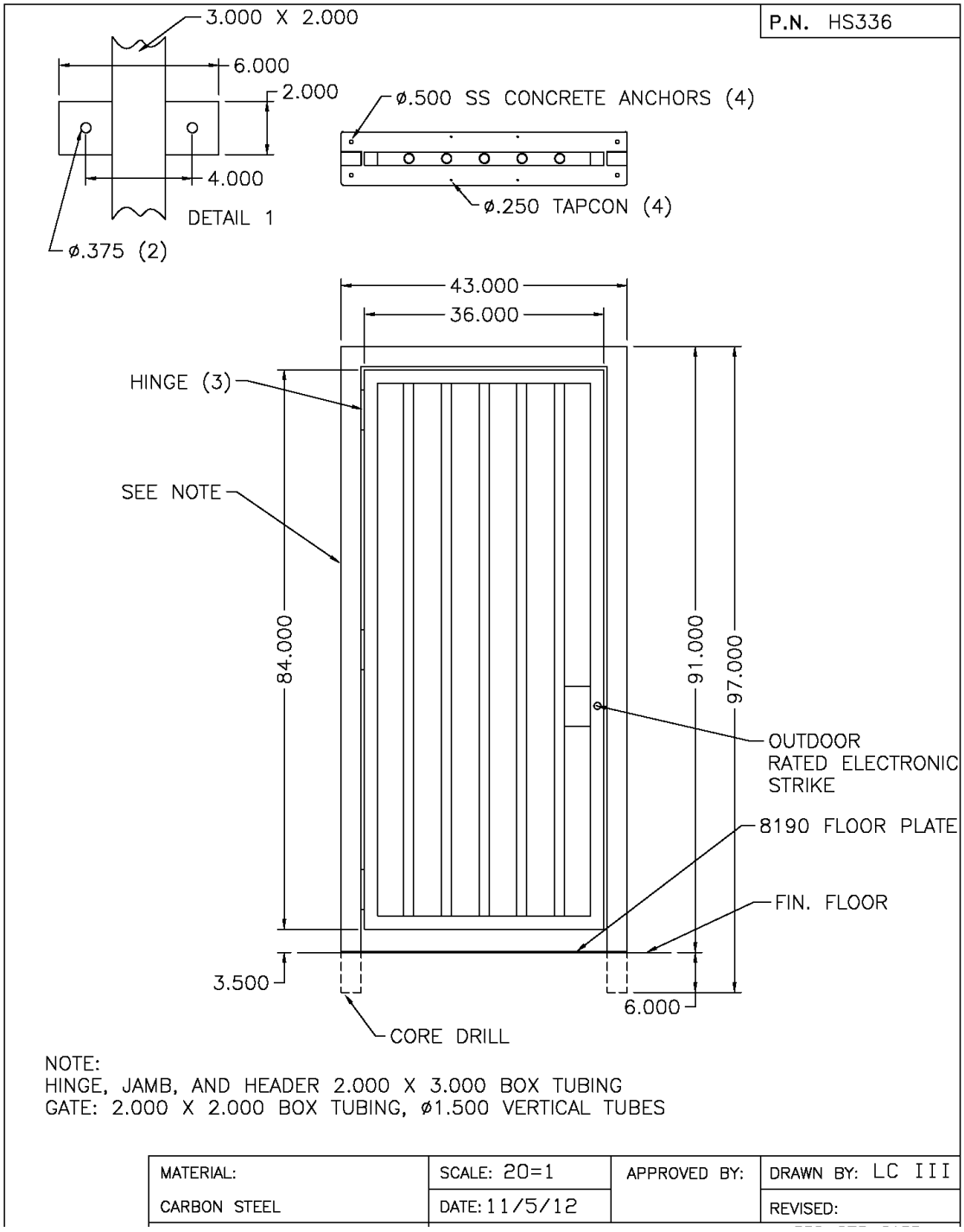
Electrical Specifications:

UL Listed Electronic Strike:
Input Voltage: 24VDC
Input Current: 170 mA

Standards and Codes:

Austenitic stainless steel:
ASTM A240, A249, A276
Hot rolled steel:
AISI C-1020, AISI C-1018
Hot dipped galvanizing:
ASTM A-143, ASTM A-153-80
Stainless steel fasteners:
ASTM A-320
American Welding Society (AWS)
Standard D 1.1

Controlled Access, Inc. is a registered ISO 9001:2008 company


P.N. HS336
3.000 X 2.000
6.000
2.000
4.000
DETAIL 1
ø.375 (2)
ø.500 SS CONCRETE ANCHORS (4)
ø.250 TAPCON (4)
43.000
36.000
HINGE (3)
SEE NOTE
84.000
91.000
97.000
OUTDOOR RATED ELECTRONIC STRIKE
8190 FLOOR PLATE
FIN. FLOOR
3.500
6.000
CORE DRILL
NOTE:
HINGE, JAMB, AND HEADER 2.000 X 3.000 BOX TUBING
GATE: 2.000 X 2.000 BOX TUBING, ø1.500 VERTICAL TUBES
MATERIAL:
CARBON STEEL
SCALE: 20=1
DATE: 11/5/12
APPROVED BY:
DRAWN BY: LC III
REVISED:

Pre-installation Tips for the HS336 Full Height ADA Gate

Before installing the HS336 ADA Gate, make sure to review these pre-installation tips to ensure a successful installation.

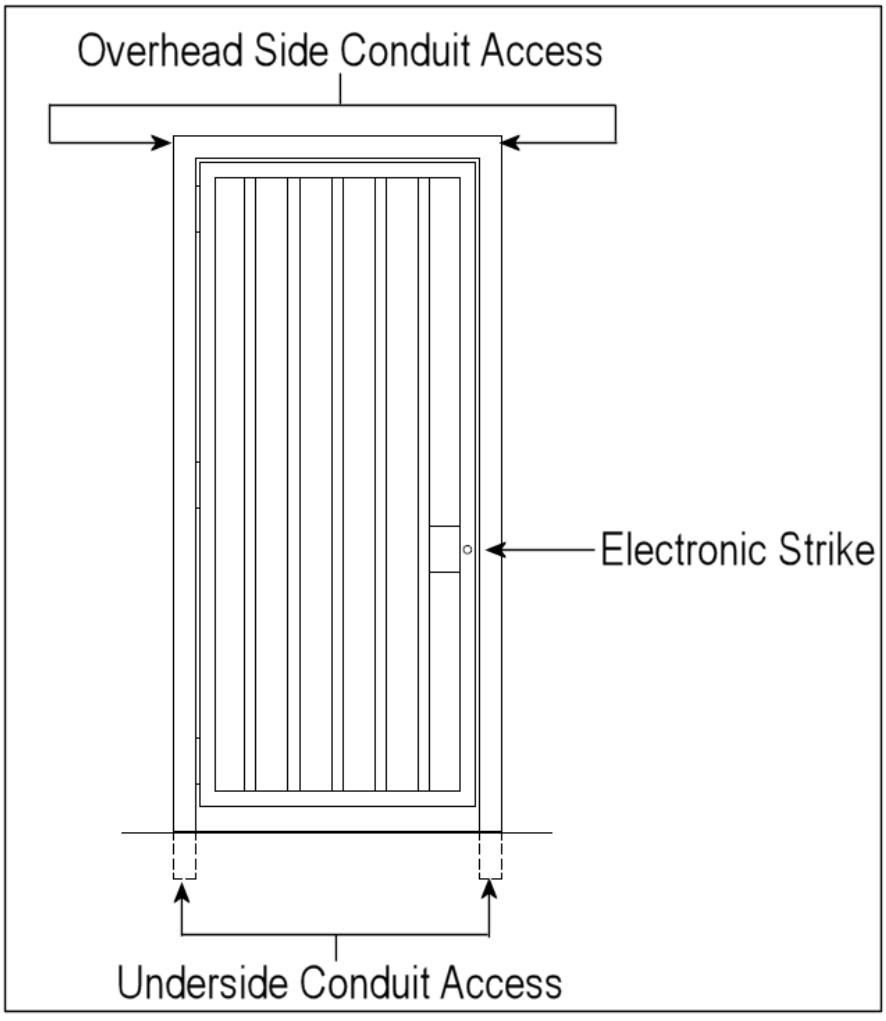
Before you get started:

- We recommend core drilling to install the HS336 gate. Should you decide not to core drill, cutting the legs off underneath the tread plate is required.
- If you are electronically locking or unlocking the gate, be aware of the various methods to accessing the electronic strike before installing. Details are provided later in this manual.
- Although the strike is field reversible, each gate comes pre-configured to lock or open upon power failure. We configure these gates based on how they were ordered. Manual gates will always need to have the strike configured as fail lock.
- It is **crucial** that the frame is installed squarely. The provided floor plate on the gate helps to ensure a square installation, but anchoring to unlevel concrete may throw this off.

Note: Failure to install the frame square can result in the gate failing to lock properly. Take advantage of the provided spacers and floor plate when core drilling to ensure proper installation.

Electrical Information for the HS336 Full Height ADA Gate

Should your facility require it, the HS336 can easily be integrated into access control systems. Each gate has a bracket on each side of the top which has conduit access. This bracket can also be utilized to bolt onto a Controlled Access full height turnstile as well (the conduit holes align on the mainframe of the turnstile as well as the bracket on the gate). Additionally, the 2" x 3" frame can be utilized from the floor to provide conduit access to the electronic strike. The diagram below calls out these convenient locations.



If utilizing the strike electronically, provide 24VDC voltage to unlock it. Depending on whether the strike fails locked or fails open, a normally open or normally closed relay contact is required. Strikes configured to fail lock require voltage to unlock, while fail open strikes require voltage to lock. The key or optional panic bar can always be used to override this and manually unlock the gate.

Installation Instructions for the HS336 Full Height ADA Gate

Preferred Installation Method

1. Review pre-installation tips, verify gate swing direction & layout holes to be drilled.
2. Core drill 4" diameter holes 40" on center, 6" deep.
3. Fill core drilled holes with fast set mortar, following the manufacturer's instructions.
4. Lift the gate vertically and slide the legs into core drilled holes.
5. Install ¼" flat head Tapcons™ into inner holes on the tread plate to secure the walk path.
6. Attach gate to turnstile or adjoining wall / structure utilizing mounting brackets on both sides of the gate.
7. Make electrical connections to the strike, if required.

Alternate Installation Method

1. Review pre-installation tips, verify gate swing direction & layout holes to be drilled.
2. Remove 2" x 3" x 6" legs from underside of floor plate with a band saw.
3. Utilizing the floor plate as a template, mark the outer holes for ½" concrete anchors
4. Drill ½" holes into the concrete pad for wedge type concrete anchors.
5. Install wedge type concrete anchors into ½" holes, following the manufacturer's directions for concrete anchor installation.
6. Place gate onto anchors.
7. Install nuts onto ½" anchors to ensure the gate is properly secured to the ground.
8. Install ¼" flat head Tapcons™ into inner holes on the tread plate to secure the walk path.
9. Attach gate to turnstile or adjoining wall / structure utilizing mounting brackets on both sides of the gate.
10. Make electrical connections to the strike, if required.

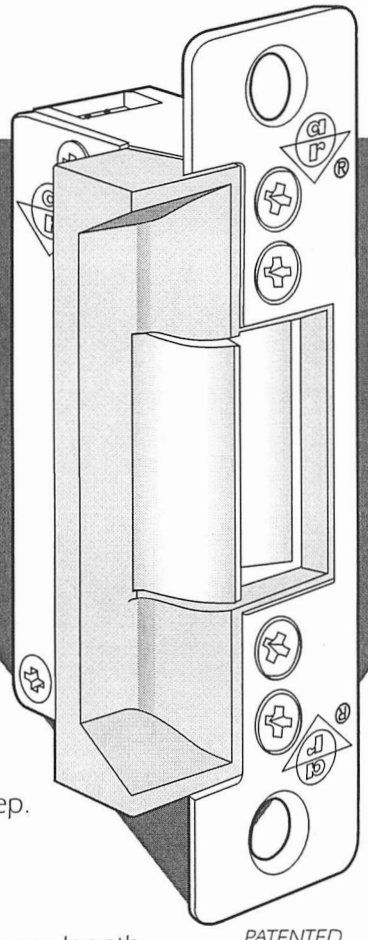
ELECTRIC STRIKES

VOLTAGE		
Available in 12, 16 or 24 volt AC and DC. DC and AC Continuous units are silent, AC intermittent units "buzz" on operation.		
CURRENT DRAW/AMPS		
Volts	**AC Int.**	**DC or AC Cont.**
12	1.42	.33
16	1.03	.22
24	.74	.17

7100
Flat Faceplate for Aluminum Jambs

7101
Radiused Faceplate for Aluminum Stiles

ANSI/BHMA Type EO9321 (Grade 1) for Adams Rite or Cylindrical Latches



PATENTED

UL Listed for Burglary Resistance

Case
Approx. 1" x 3-3/8" x 1-5/8" deep. Zinc-aluminum alloy.

Strike Lip
Basic 7100 strike has lip of proper length for 1-3/4" thick door that closes flush with jamb edge. Where door thickness or jamb shape differs from this standard relationship, extended lip available, specified by last dash number. (Not available on 7101.)

Fail Safe/Fail Secure
Field convertible from one mode to the other. However, AC intermittent solenoid must not be used continuously in either.

Strike Opening
5/8" x 1-7/16" x 1/2" deep. Bolt retainer jaw is stainless steel. Strike accepts bolt of any Adams Rite 4700 Series deadlatch or cylindrical latches shown with model 7140. See 7160 and 7170 strikes for use with other make mortise latches.

Faceplate
Measures 1-1/4" x 4-7/8". 7100 has flat faceplate; 7101 is radiused to match nose on inactive leaf in a pair of narrow stile glass doors. Available in a wide range of architectural finishes.

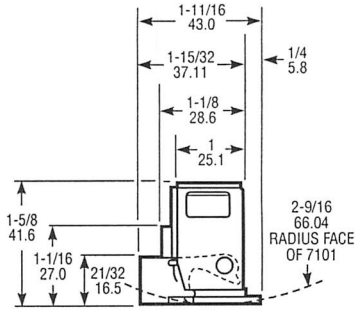
Function
Remote electrical control of any door equipped with an Adams Rite Series 4500 or 4700 (or similar) deadlatch or "key-in-knob" sets. Electrical actuation unlocks strike jaw, releasing latchbolt so door can be opened without operating latch itself. Extremely compact mechanism fits into aluminum jamb (or opposing door) sections as shallow as 1-5/8". Fits prep for 7500/7800/7000 Series.

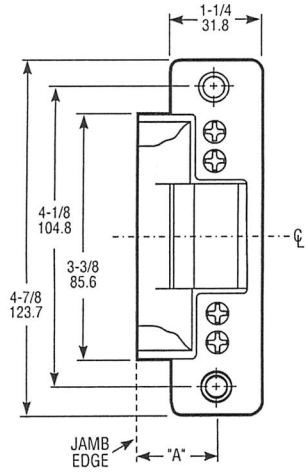
ADAMS RITE MANUFACTURING CO.
260 Santa Fe Street
Pomona, California 91767
(800) 872-3267 Fax:(800) 232-7329
www.adamsrite.com

7100, 7101 Electric Strike

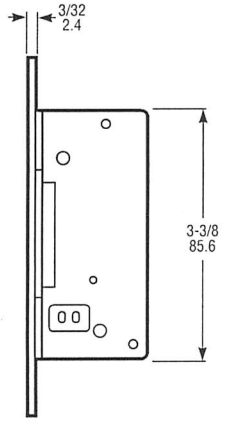
DIMENSIONS

INCHES
MILLIMETERS
Nominal, subject to tolerance extremes.





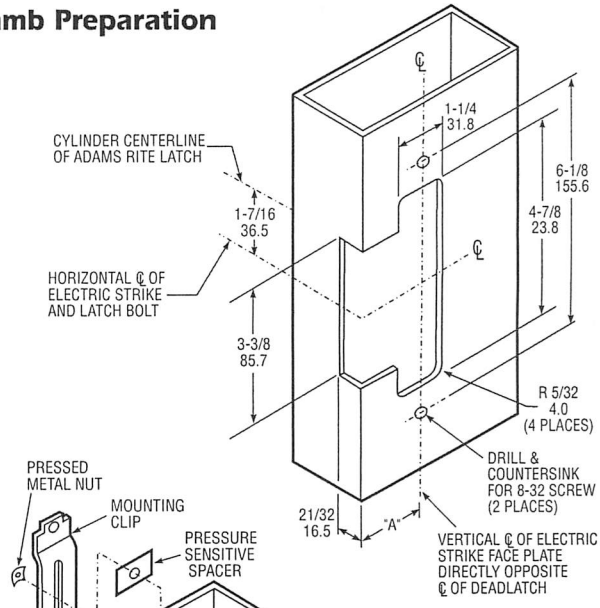
STANDARD UNIT FITS DIM. "A" UP TO 1-1/16" (SEE DASH NO.)

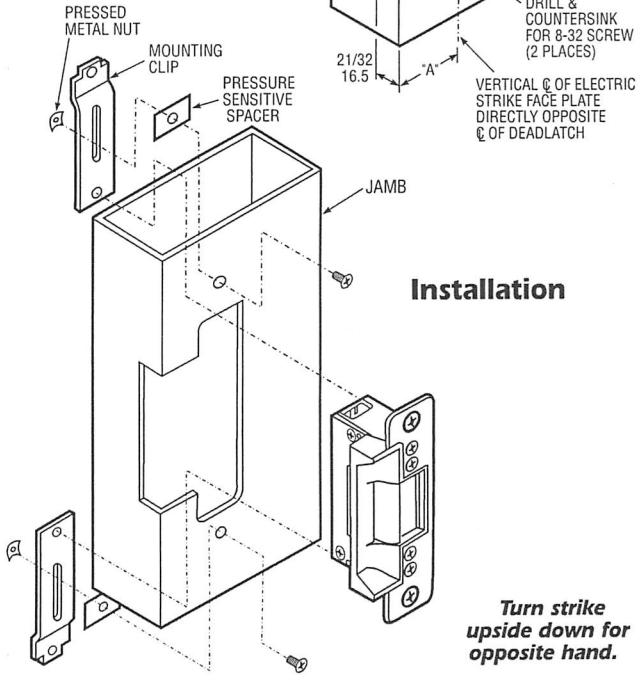


MOUNTING BRACKETS FURNISHED

INSTALLATION

Jamb Preparation





Installation

Turn strike upside down for opposite hand.

HOW TO ORDER

Specify quantity and the following information.
Order 4603 Rectifier and/or 4605 or 4606 Transformer separately.
(4603 included with AC Cont.)

Specify Model	Voltage	Current & Duty	Features**
7100 Flat	**3** 12 Volt	**1** DC Continuous or Intermittent	**0** Std/Fail-Secure
7101 Radius	**4** 16 Volt	**2** AC Continuous*	**5** Fail-Safe
	5 24 Volt	**4** AC Intermittent	**7** Monitor/Fail-Safe
			9 Monitor/Fail-Secure

7100 - 3 1 5 - 605 - 00

**A DC strike with rectifier attached for use on AC current.*

***Fail-secure can be field converted to fail-safe or vice-versa.*

****7101 available in 628, 313, 335 only.*

Finish***	
628	Clear Anodized
605	Bright Brass
612	Satin Bronze
613	Oil Rubbed Bronze
313	Dark Bronze Anod.
335	Black Anodized
625	Bright Chrome
626	Satin Chrome

7100 Lip Extension (Dim."A") (Door Centerline to Jamb Edge)			
00	1.06" or less	**07**	2.25"
01	1.50"	**08**	2.38"
02	1.63"	**09**	2.50"
03	1.75"	**10**	2.63"
04	1.88"	**11**	2.75"
05	2.00"	**12**	2.88"
06	2.13"	**13**	3.00"

STANDARD PACKAGE

Individually boxed with mounting screws, mounting brackets and adhesive shims to accommodate jamb or stile extrusion thickness greater or less than nominal 1/8 inch.

OPTIONS

Available with two monitoring signal switches which sense whether latch bolt is in strike and whether strike jaw is blocked. Choice of voltage in AC and DC for intermittent or continuous duty. Series 7100 (flat) available with extended strike lip (see chart). Specify assembled for either fail-secure (locked when unpowered) or fail-safe (locked when powered) operation, but can be field-converted to the other mode.

4603 Rectifier - Converts AC to DC, installs in low voltage line between transformer and strike. Rated 2 amps. (200 PIV).

4605 Transformer - Converts 120VAC to 24VAC. Rated 40 Volt-amp output assures plenty of power for strike release. Patented mounting bracket fits in knockout hole of standard junction boxes.

4606 Transformer - Plug-in version for standard wall outlet.

See separate specification sheet for more information on Strike options.

Changing From Fail-Safe to Fail-Secure & Vice-Versa:

1) Remove faceplate, subcover (2), & cover (1)
2) Remove latch (7), blocking arm (6), blocking arm return spring (16), & retainer plate (15)

Changing From Fail-Secure to Fail-Safe:

1) With bolt facing you remove solenoid (3), plunger (4), & shuttle return spring (5).
2) Place shuttle return spring (5) on left-hand side of shuttle (17). Place solenoid and plunger facing the side opposite of shuttle return spring into groove on the shuttle. (See page three for diagram)
3) Place retainer plate on top of solenoid and place latch, blocking arm & blocking arm return spring in original position.

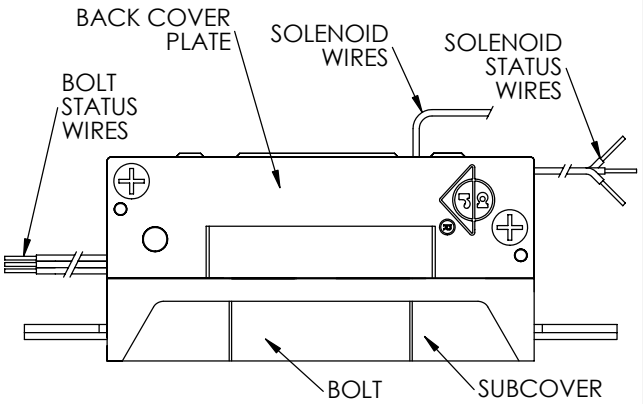
Note: Fail-safe must be continuous duty only.

Changing from Fail-safe to Fail-secure:

1) With bolt facing you remove solenoid (3), plunger (4) & shuttle return spring (5).
2) Place shuttle return spring (5) on right hand side of shuttle (17). Place solenoid and plunger facing the side opposite of shuttle return spring into groove on shuttle. (See page three for diagram)
3) Place retainer plate on top of solenoid and place latch, blocking arm & blocking arm return spring in original position.

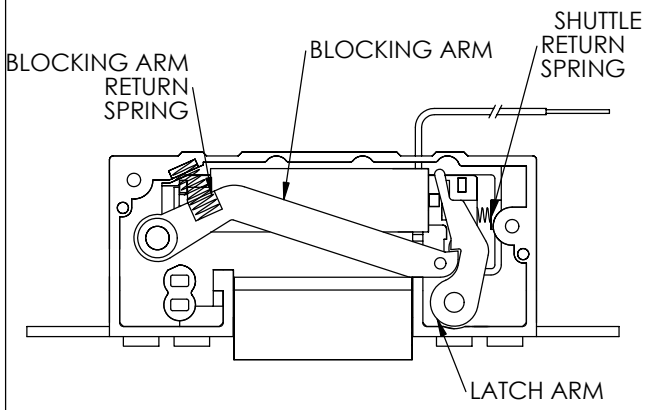
Faceplate, subcover & cover can now be added to close strike.

WIRE CODING FOR MONITORED VERSION



MONITOR WIRING		POWER INPUT WIRING	
NC:	RED	12VAC:	YELLOW/BLACK
NO:	WHITE	12VDC, 24VAC	RED/BLACK
COMMON:	BLACK	24VDC:	WHITE/BLACK

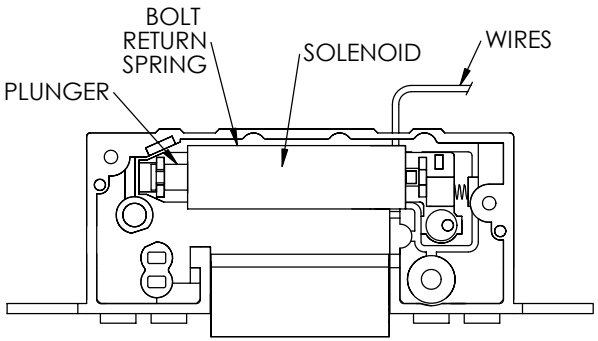
STEP 1



REMOVE SUBCOVER (ONE SCREW)
REMOVE BACK COVER PLATE (TWO SCREWS)
CAREFULLY REMOVE BLOCKING ARM SPRING
REMOVE BLOCKING ARM AND LATCH ARM

STEP 2

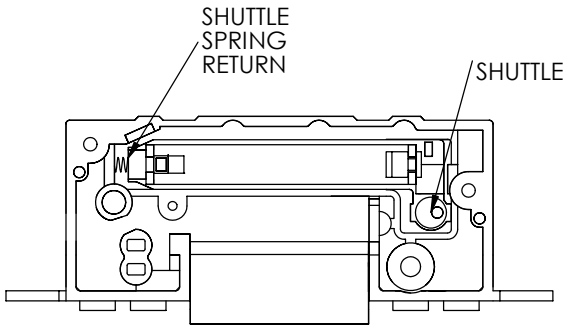
FAIL SECURE



REMOVE SOLENOID

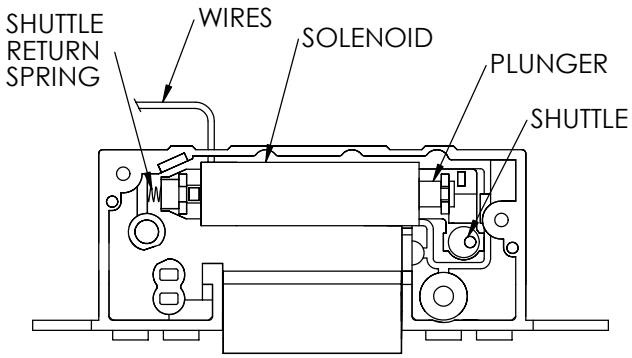
STEP 3

FAIL SAFE



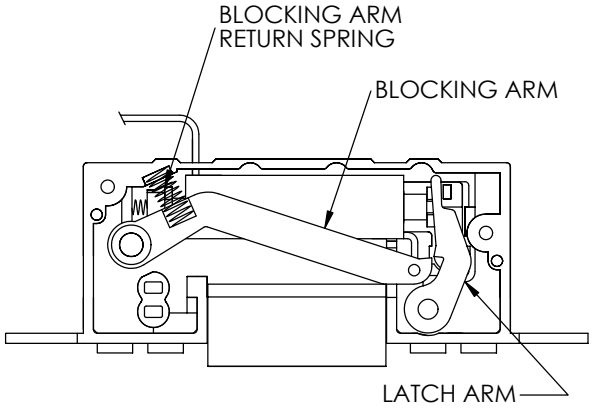
TRANSFER SHUTTLE RETURN SPRING TO OPPOSITE END OF SHUTTLE. NOTE: WHATEVER THE FUNCTION, THE SHUTTLE RETURN SPRING SHOULD ALWAYS BE AT OPPOSITE END TO THE SOLENOID PLUNGER.

STEP 4



REVERSE SOLENOID AND REPLACE, ENSURING CORRECT PLACEMENT AND ALIGNMENT. WITH THE SOLENOID SEATED PROPERLY THE SHUTTLE SHOULD MOVE FREELY.

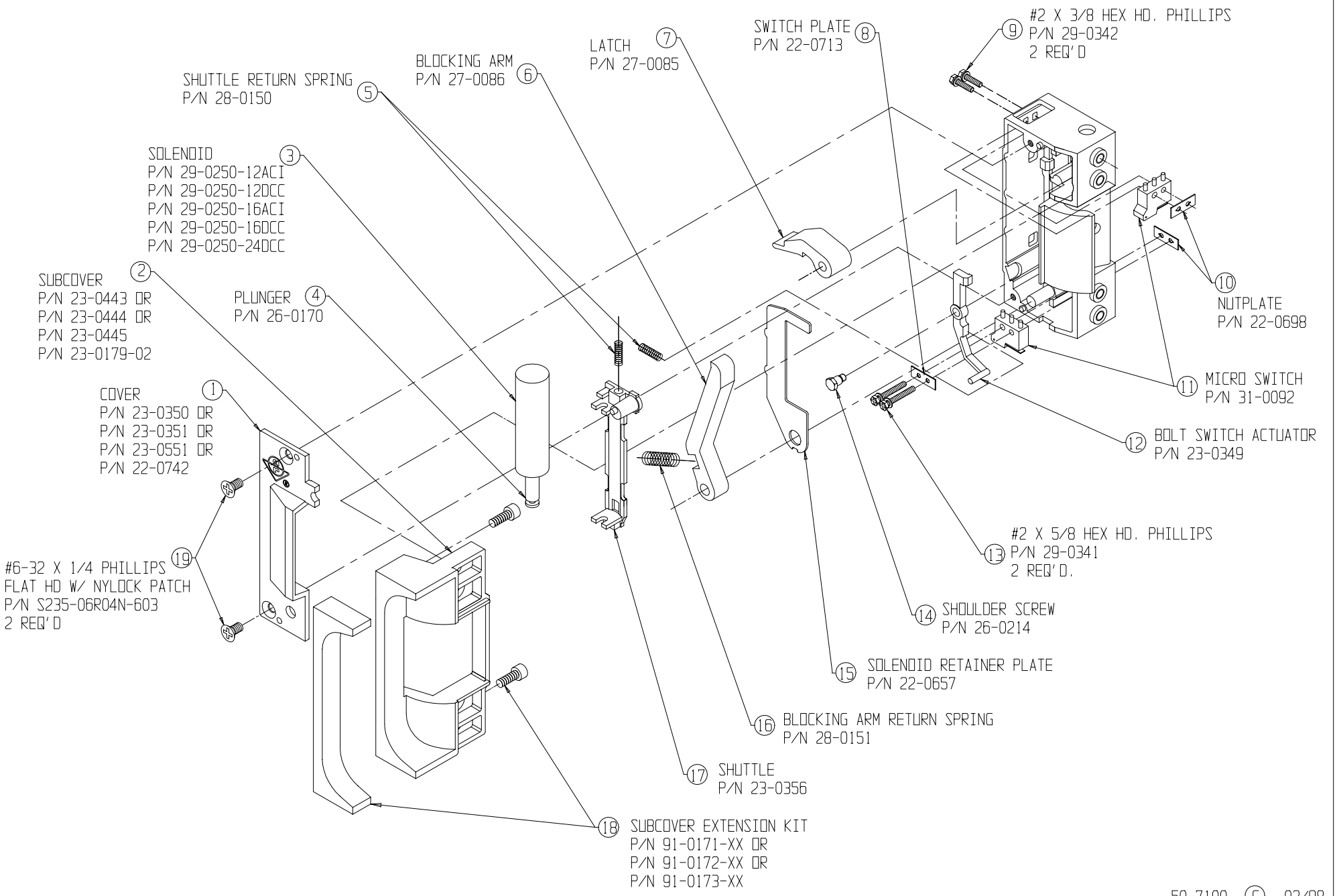
STEP 5



REPLACE LATCH ARM AND BLOCKING ARM (WITH SPRING)
REPLACE BACK COVER PLATE
REPLACE SUBCOVER
* TEST PRIOR TO INSTALLATION*

7100 EL-STRIKE FIELD CONVERSION

80-0180-472 Rev. A ECN: 10605 Page 1 of 1 Date: 10/22/2003 Apprvd:



50-7100 © 02/98

ADAMS RITE MANUFACTURING COMPANY
260 SANTA FE ST.
POMONA, CA91767
OFFICE: (909) 632-2300 FAX: (909) 632-2369

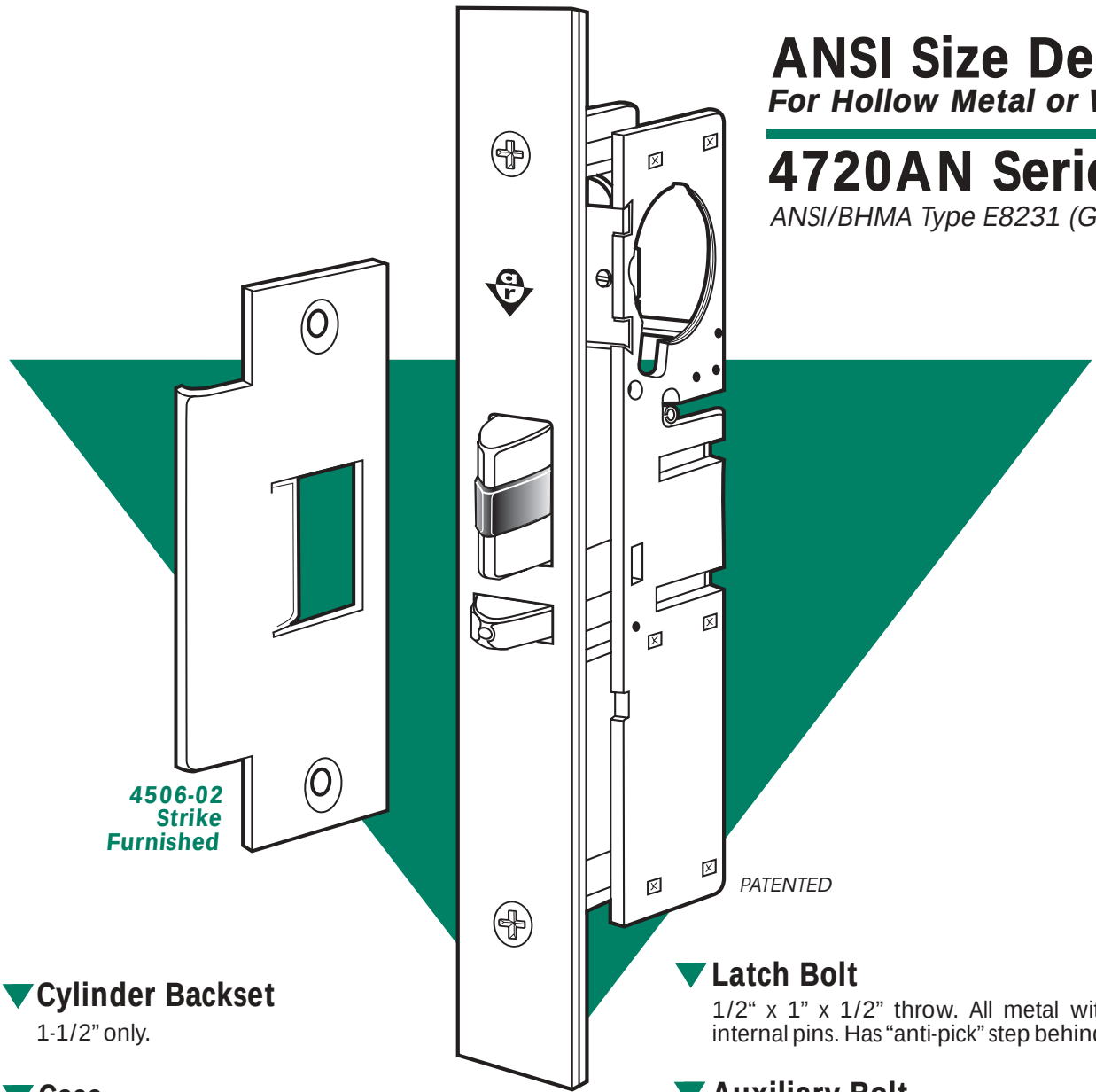
7100 SERIES ELECTRIC STRIKE

ANSI Size Deadlatch

For Hollow Metal or Wood Doors

4720AN Series

ANSI/BHMA Type E8231 (Grade 1)



4506-02 Strike Furnished

PATENTED

Cylinder Backset

1-1/2" only.

Case

Steel with corrosion-resistant plating. 1" x 5-13/16" x 2-5/32".

Function

For hollow metal or wood doors prepared for hardware according to the specifications of the American National Standards Institute, the 4720AN Deadlatches provide precise traffic control. A key-controlled bolt hold-back feature allows a door to be free-swinging part of the day and exit-only when the bolt is free to latch. This allows a "locked" entrance to be used as an exit by customers or visitors already in the building. Interchangeable, without stile or jamb modification, with any MS1850SN Deadbolt of same faceplate shape. Replaces 4520ANSI Deadlatch.

Latch Bolt

1/2" x 1" x 1/2" throw. All metal with hardened steel internal pins. Has "anti-pick" step behind mounting face.

Auxiliary Bolt

All metal with hardened steel pin. Deadlocks latch bolt to prevent "loiding" or case-knife entry.

Strikes

Stainless steel, US32D Satin finish (630). Furnished to ANSI preparation specifications for flat jamb. (See also page SW-26 and Electric Strike section.)

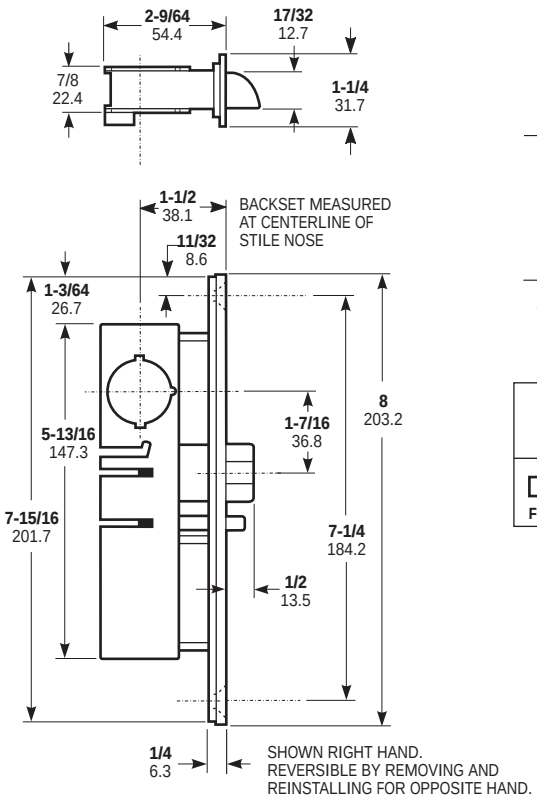
Operation

Turn key or operate handle to retract spring-loaded latch bolt. To hold bolt retracted, push it in and secure by reverse turn of key (see back page). Uses any standard mortise cylinder with MS® cam (see page SW-28).

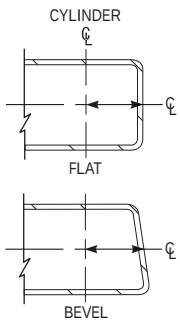
4720AN Series Deadlatch

DIMENSIONS

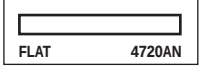
INCHES
MILLIMETERS
Nominal, subject to tolerance extremes.

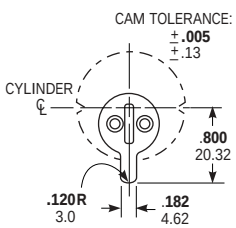


HOW BACKSET IS MEASURED:



ARMORED FACEPLATE
1-1/4" x 8"





Cylinder Cam

4720AN Series Deadlatches are operable by any standard 1-5/32" diameter mortise cylinder with special MS® cam dimensioned as shown. Cylinders with MS® cams can be readily obtained from most cylinder manufacturers. See page SW-28 for cylinder make and trim ring information.

HOW TO ORDER

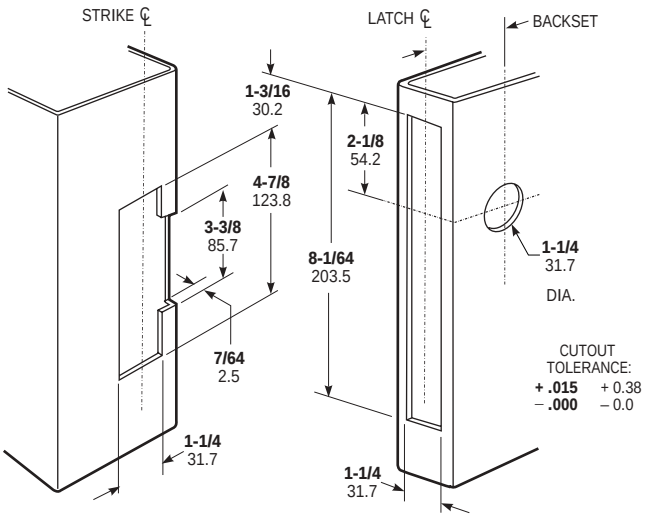
Specify quantity and the following information.
Order related hardware separately.

Door Nose Shape		Handing		Strike	
0AN	Flat	05	LH or RHR	602	4506
2AN	Bevel	06	RH or LHR	000	Less Strike

4720AN06-602-313

Finish	
628	Clear Anodized
612	Satin Bronze
313	Dark Bronze Anod.
335	Black Anodized

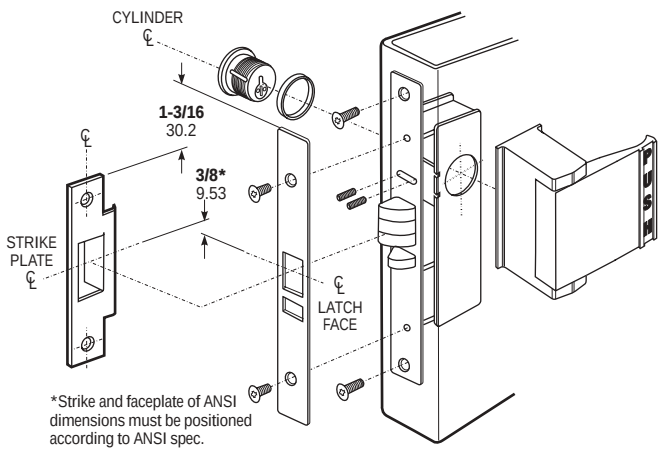
INSTALLATION



Jamb Preparation

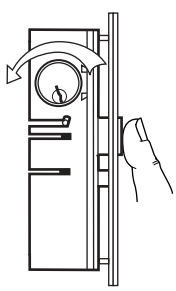
Door Preparation

Identical to MS1850SN Series
(See also prep for 4590 Paddle)



*Strike and faceplate of ANSI dimensions must be positioned according to ANSI spec.

Latch, Paddle & Cylinder Installation



Bolt Holdback

A reverse turn of the key (while bolt is held fully retracted) retains the bolt, allowing the door to be free swinging.

OPTIONS

Door Nose Shape, Finish, Strike and Handing must be specified when ordering. For Handles, see page SW-25 & 26. For Paddles, see page SW-27.

STANDARD PACKAGE

Individually boxed with strike and machine screws for mounting. Cylinders, paddle or handle available at extra cost. Shipping weight: 1-1/4 lbs. Also available in a 20 unit pack for volume users.

Norton®

Tri-Style 1600 Series

Non Handed Door Closer

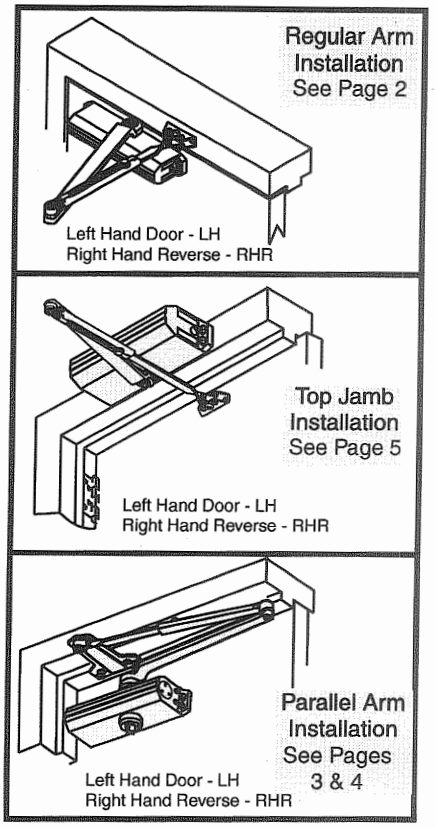
Installation Instructions

80-9316-2502-020 (12-02)

CAUTION An Incorrectly installed or improperly adjusted door closer can cause property damage or personal injury. These installation instructions should be followed to avoid the possibility of misapplication or misadjustment. CAUTION

Non Hold Open Models

Sized (Sizes 2,3,4,5,6)	Adjustable (Sizes 3 thru 6)
Weaker ↓ Stronger	1601
1602BC	(Sizes 1 thru 4)
1603BC	1601BF
1604BC	
1605BC	
1606BC	

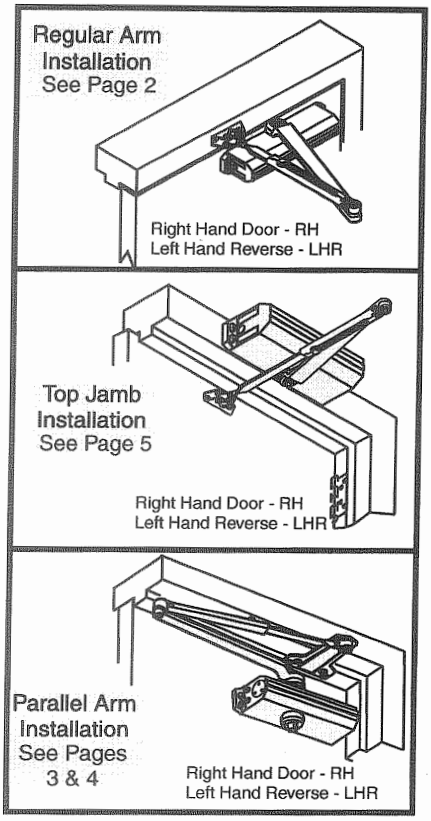


Official Supplier Habitat for Humanity®

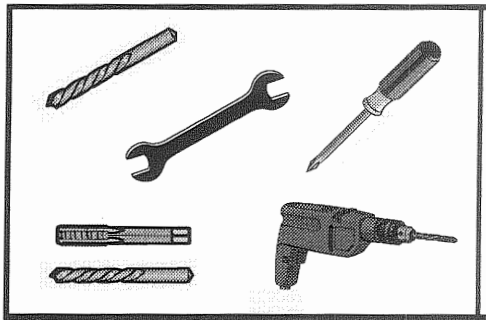
"DA" suffix (Delayed Action) is an optional feature. A separate sheet is supplied showing closer adjustments.

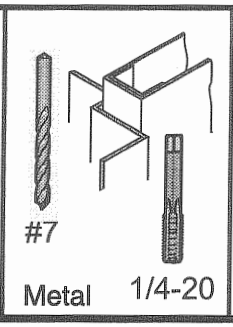
NOTE: For special applications a separate door and frame preparation template is packed with these instructions. Use this instruction sheet for installation sequence and closer adjustments only.

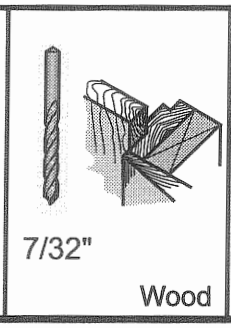
- Doors should be hung on ball bearing or anti-friction hinges.
- A separate door stop is recommended.
- Door and frame must be properly reinforced.
- Adjust closing time speed between 3 and 7 seconds from 90° to 0°.



- These door closers should NOT be installed on the exposed side (weather side) of exterior doors.







Self Drilling Screws Wood and Metal

For Wood drill 3/16 hole

Machine Screws

#7 Drill, 1/4-20 Tap

(Optional)

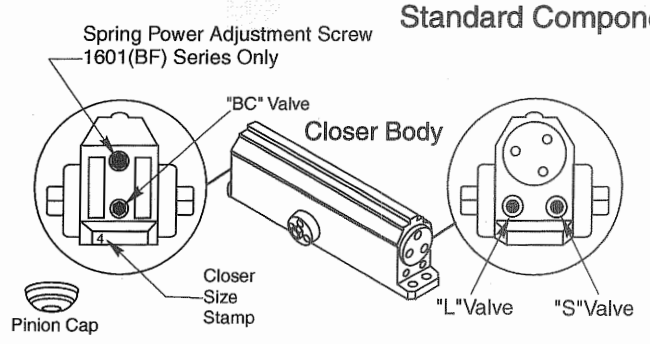
Sleeve Nut and Bolt

Drill 9/32 thru from Closer Side 3/8 Drill other side

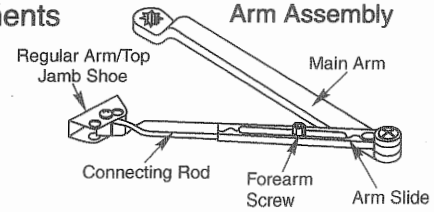
Thru Bolt and Grommet Nut

Drill 9/32 thru from Closer Side 3/8 Drill other Side

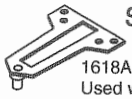
Standard Components



Arm Assembly

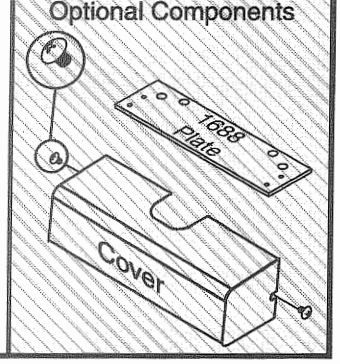


Soffit Plate



1618A Soffit Plate Used with Parallel Arm Closers Only

Optional Components



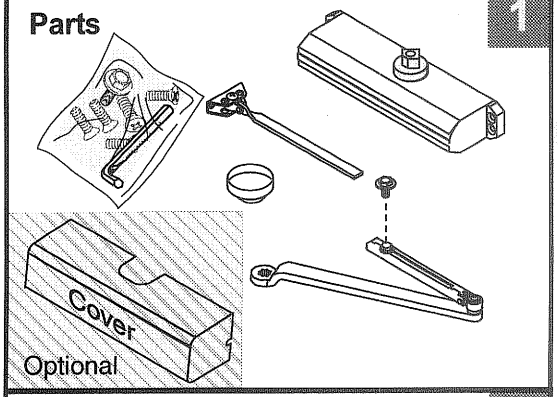
1600 Series

Non Hold Open Door Closers — **Regular Arm**

80-9316-2502-020 (12-02)

Parts

1



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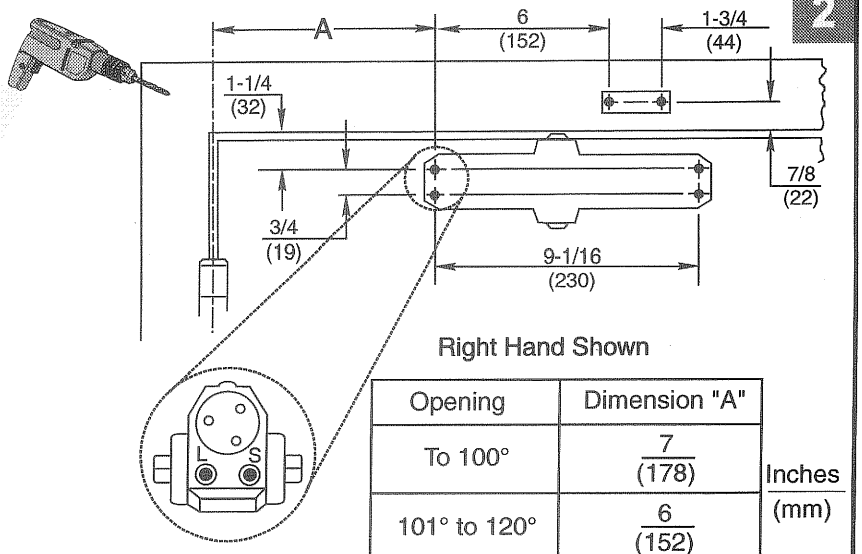


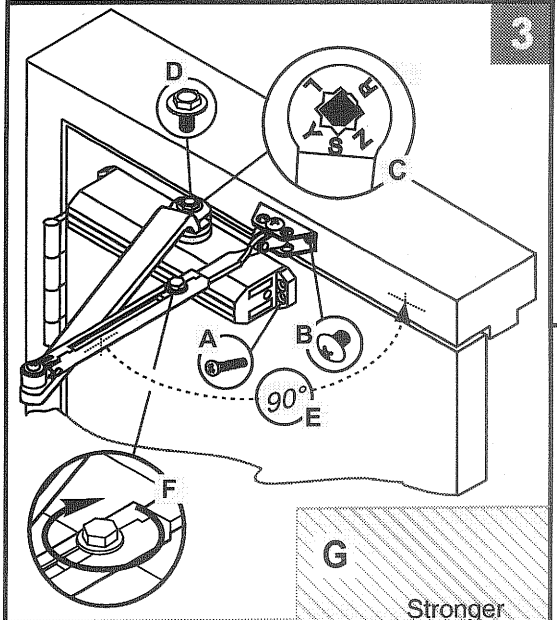
Right Hand Shown

Opening	Dimension "A"
To 100°	7 (178)
101° to 120°	6 (152)
*121° to 180°	3-1/2 (89)

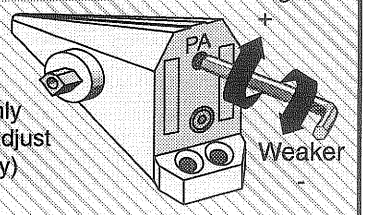
Inches (mm)

* Door/Wall/Hardware/Jamb conditions permitting

3



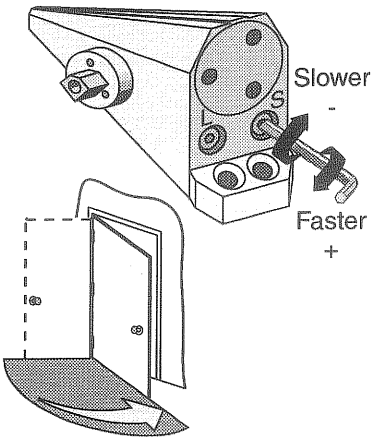
G



1601(BF) Only
Spring Power Adjust
(If Necessary)

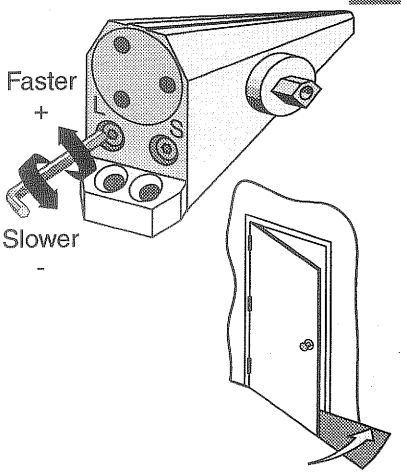
Sweep

4



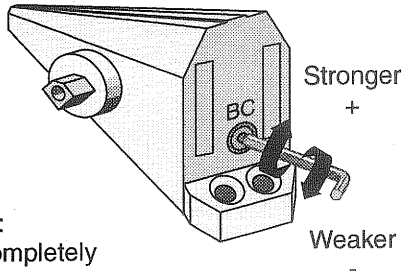
Latch

5

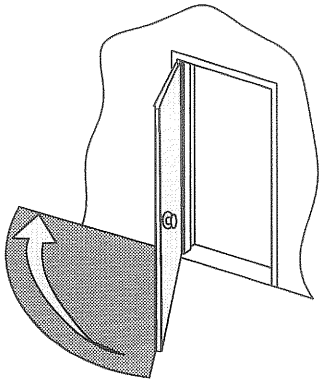


Backcheck

6

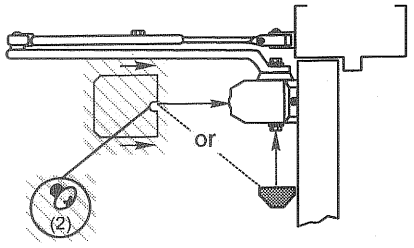


Caution:
Don't completely close valve



Pinion Cap or Optional Cover

7



Screw pinion cap onto pinion shaft by hand or with a Phillips screw driver - DO NOT OVER TIGHTEN.

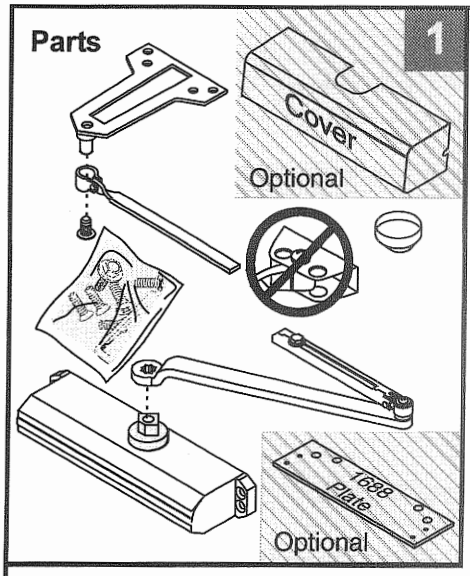
1600 Series

Non Hold Open Door Closers — **Parallel Arm**

80-9316-2502-020 (12-02)

Parts

1



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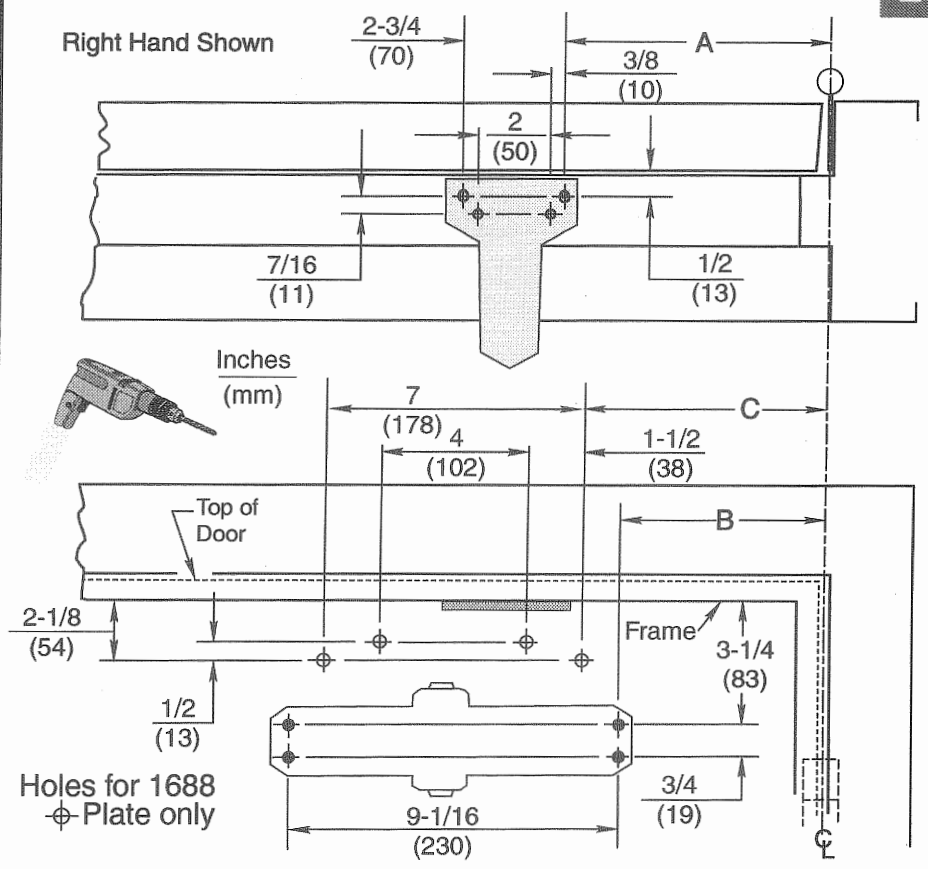
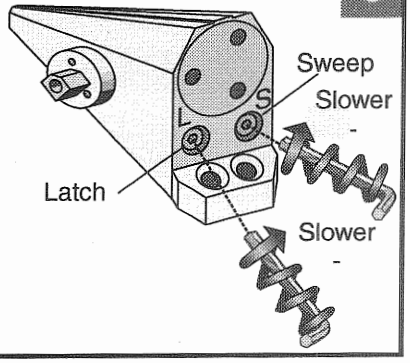


Door Opening	A ⊕	B ●	C ⊕
To 100°	9-1/4 (235)	7-5/8 (194)	8-5/8 (219)
101° to 130°	7-3/4 (197)	6-1/8 (156)	7-1/8 (181)
*131° to 180°	5-3/4 (146)	4-1/8 (105)	5-1/8 (130)

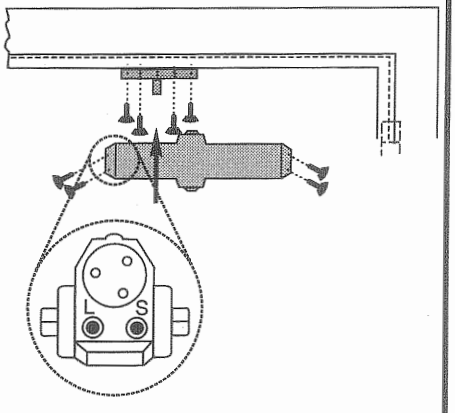
* Door/Wall/Hardware/Jamb conditions permitting

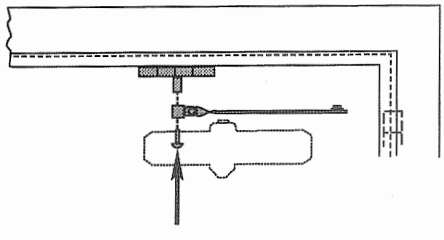
Close Valves

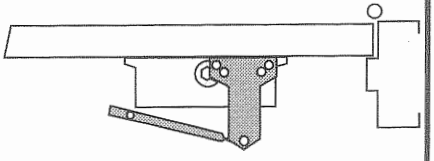
3



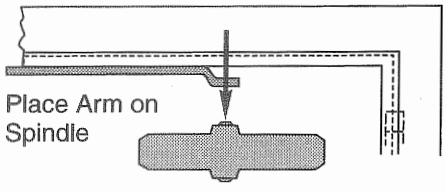
4

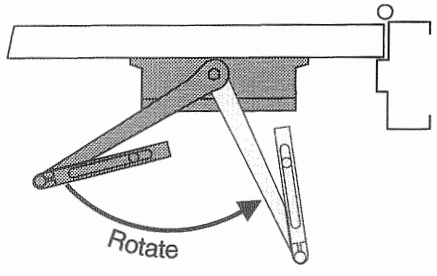


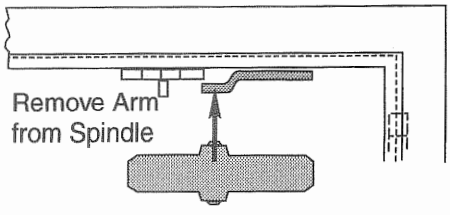




5







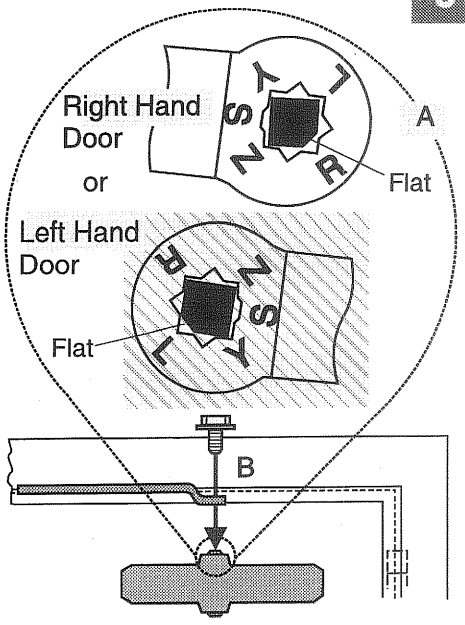
See Step 6 on Page 4

1600 Series

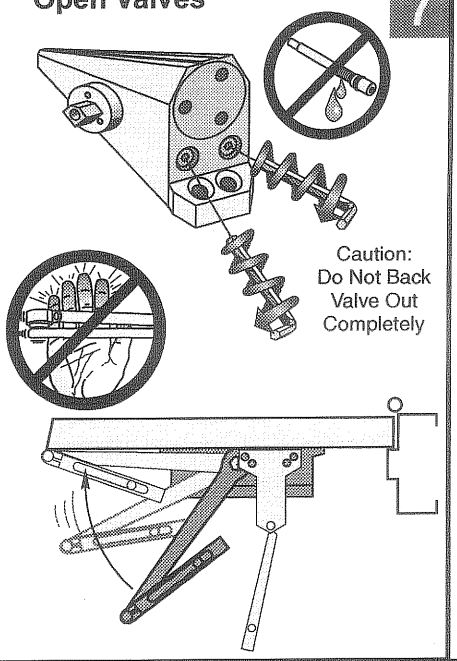
Non Hold Open Door Closers — **Parallel Arm**

80-9316-2502-020 (12-02)

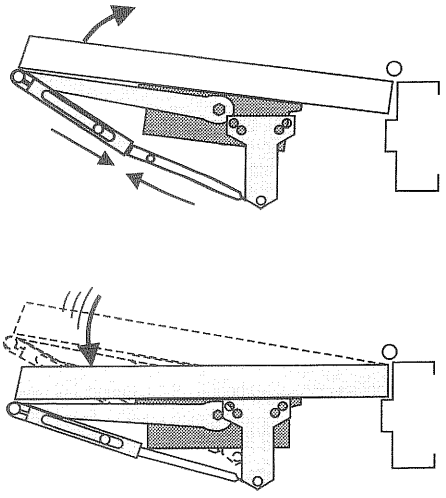
6



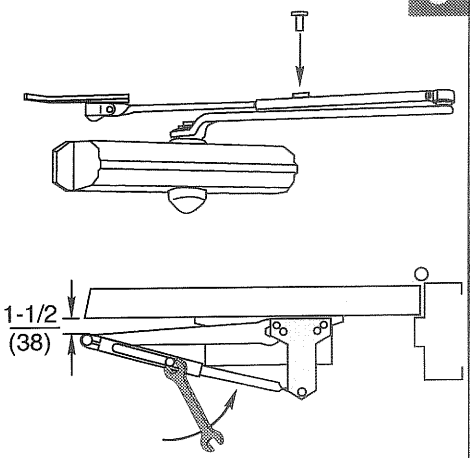
Open Valves 7



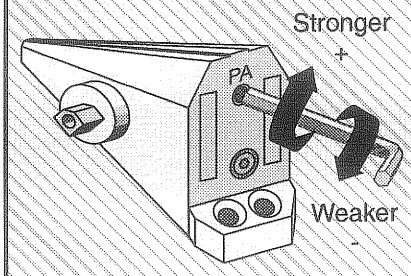
Assemble Arm 8



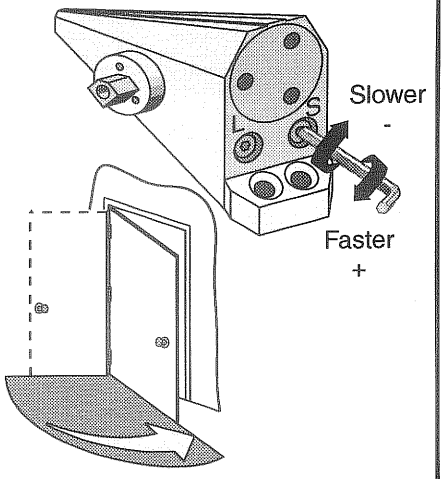
Arm Screw 9



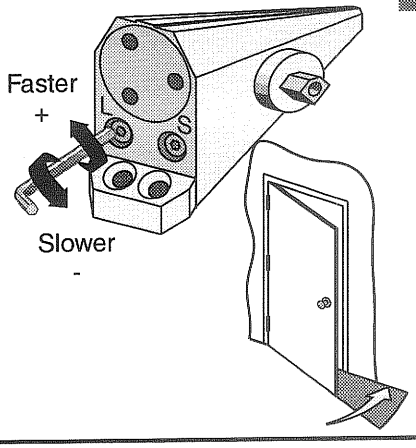
Spring Power Adjust 10
1601(BF) only
(If necessary)



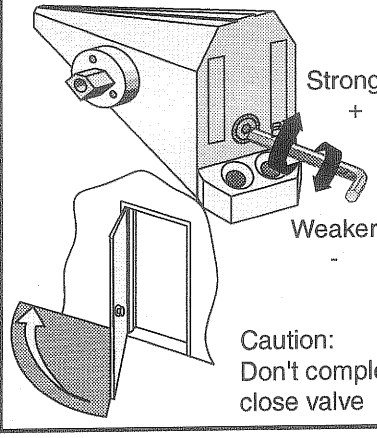
Sweep 11



Latch 12

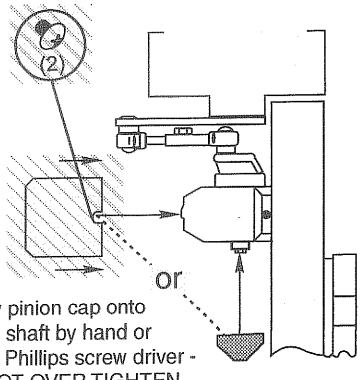


Backcheck 13



Caution:
Don't completely close valve

Pinion Cap or Optional Cover 14



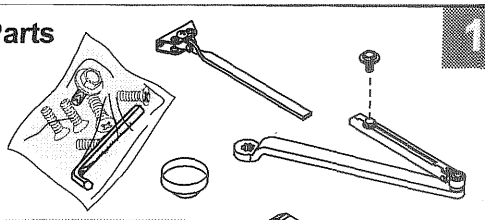
Screw pinion cap onto pinion shaft by hand or with a Phillips screw driver - DO NOT OVER TIGHTEN.

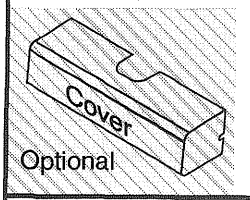
1600 Series

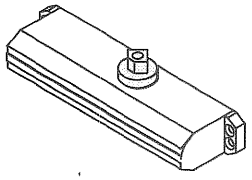
Non Hold Open Door Closers - **Top Jamb Arm**

80-9316-2502-020 (12-02)

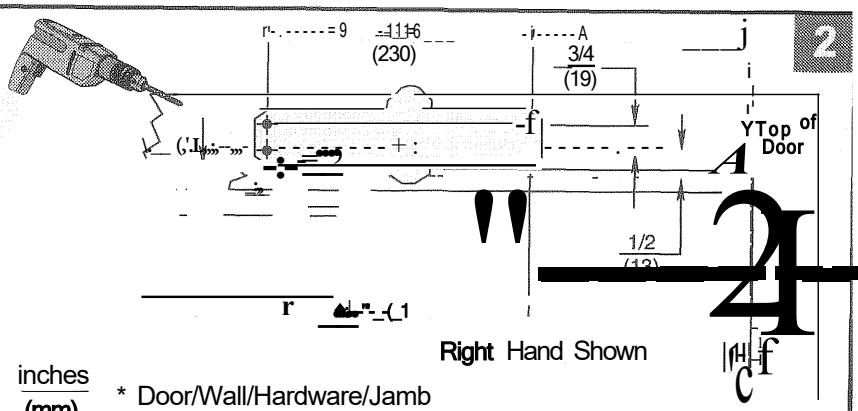
Parts 1







2

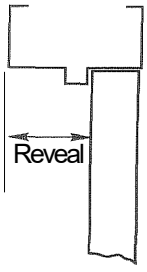


inches
(mm)

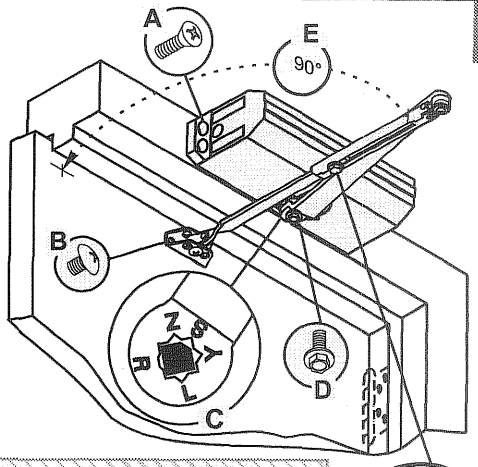
* Door/Wall/Hardware/Jamb conditions **permitting**

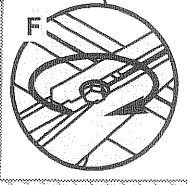
Opening	Dimension "N
To 100°	7-1/2 (191)
101° to 120°	6 (152)
* 121° to 180°	3-1/2 (89)

A longer connecting rod is required for reveals greater than 3" (76)

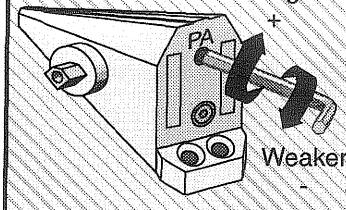


3



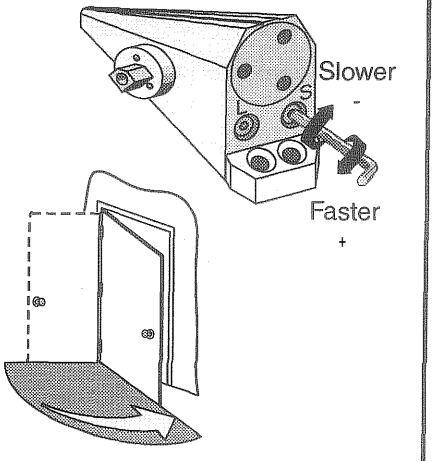


G

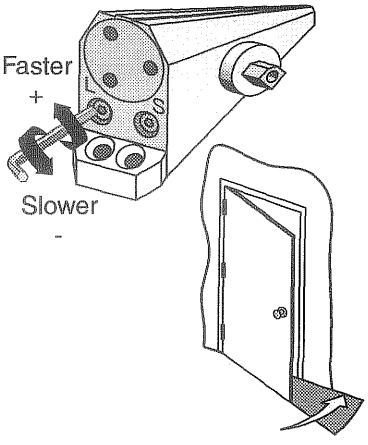


1601(BF) Only
Spring Power Adjust
(If Necessary)

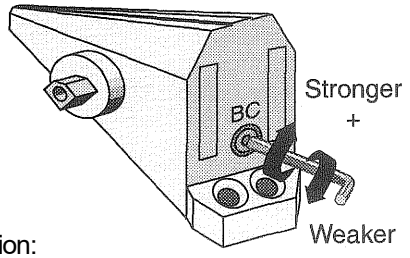
Sweep 4



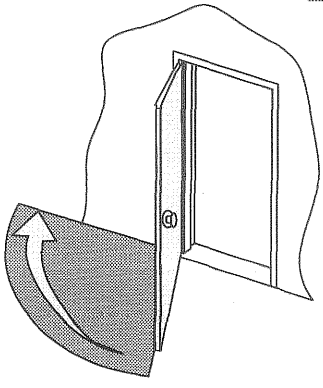
Latch 5



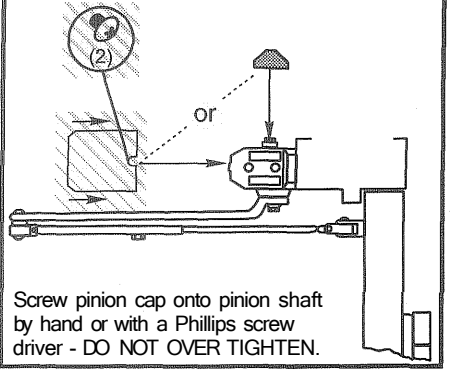
Backcheck 6



Caution:
Don't completely close valve



Pinion Cap 7



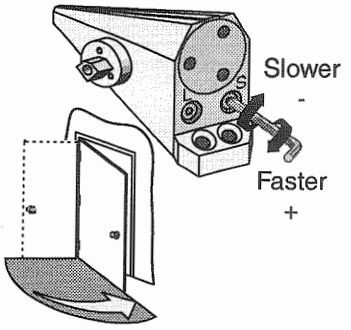
Screw pinion cap onto pinion shaft by hand or with a Phillips screw driver - DO NOT OVER TIGHTEN.

1600 Series Adjustments Page

Norton Door Controls
An ASSA ABLOY Group Co.
1902 Airport Road, Monroe, NC
Telephone: (800)-438-1951; Fax: (800)-338-0965
www.nortondoorcontrols.com

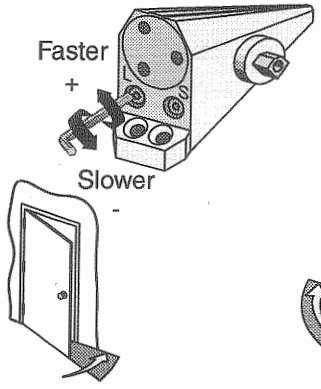
80-9316-2502-020 (12-02)

Sweep

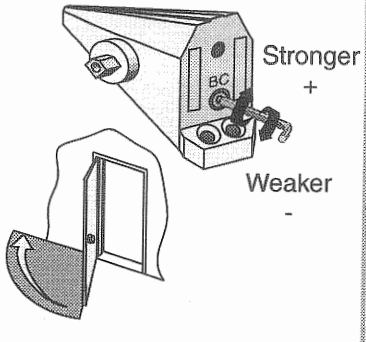


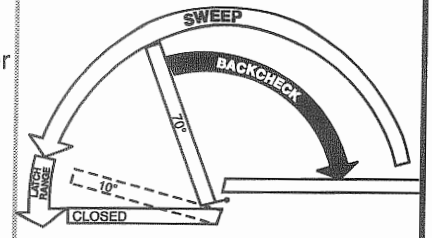
Latch

(Use 1/8" Hex Wrench for these Adjustments)

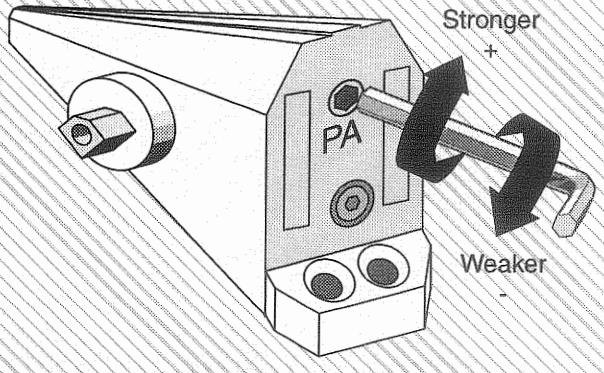


Backcheck





Spring Power Adjust 1601 (BF) only



(Use 1/8" Hex Wrench for this Adjustment)

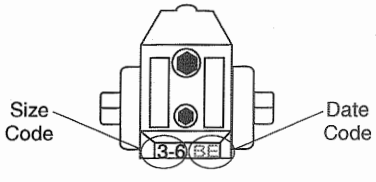
Adjustment Chart

	DOOR	TYPE OF INST.	*	Number of Turns Required MAXIMUM DOOR SIZE 34" (0.85M)	36" (0.90M)	40" (1.00M)	44" (1.10M)	48" (1.20M)
1601BF	INTERIOR	Regular Arm Top Jamb	FULL 360° TURNS OF 1/8" POWER ADJUSTMENT WRENCH	1	1	2	3	3
		Parallel Arm		2	2	3	4	5
	EXTERIOR	Regular Arm Top Jamb		5	6	8	NOT RECOMMENDED USE 1601	
		Parallel Arm		8	9	12		
1601	INTERIOR	Regular Arm Top Jamb	FULL 360° TURNS OF 1/8" POWER ADJUSTMENT WRENCH	2	4	6	9	11
		Parallel Arm		3	5	7	10	13
	EXTERIOR	Regular Arm Top Jamb		3	5	7	10	13
		Parallel Arm		5	7	10	14	16

*18 FULL (360°) TURNS MAXIMUM AVAILABLE

= 8 Turns As Shipped

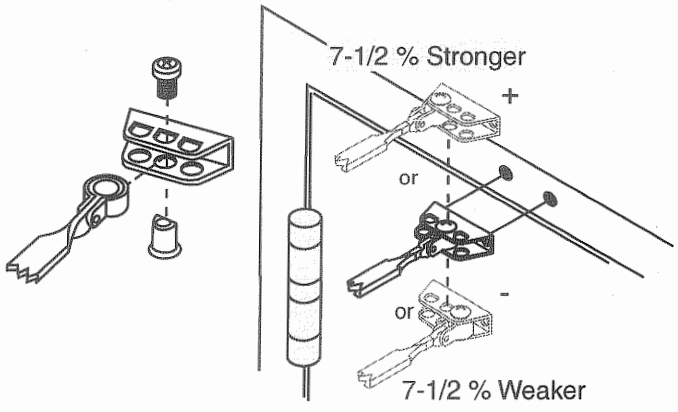
To identify your model:



2=1602BC
3=1603BC
4=1604BC
5=1605BC
6=1606BC

3-6=1601
1-4=1601BF

Arm Placement in Shoe



Warranty Information

Seller warrants the goods against defective workmanship and materials provided that Buyer notify Seller within one (1) year after receipt by Buyer of the goods of any claim under this Warranty. The liability of Seller shall be limited to replacing or repairing defective goods returned by Buyer and delivered to the factory of the Seller, transportation charges prepaid.

Replaced or repaired goods will be redelivered freight repaid to the address of Buyer shown hereon. Except for the Warranty contained herein, there shall be no other warranties, such as warranties of fitness and merchantability or otherwise express or implied, written or verbal, and Seller shall not be liable for consequential damages in any event.