



# Installation Instructions Corrosion Resistant Series

1600SS Series Sized Closers

1601BFSS Series Multi-Sized Closers

Non Hold Open Models

Sized  
(Sizes 2, 3, 4, 5, & 6)

1602BCSS

1603BCSS

1604BCSS

1605BCSS

1606BCSS

Multi-Sized  
(Sizes 3 thru 6)

1601SS

(Sizes 1 thru 4)

1601BFSS

# ASSA ABLOY

**CAUTION**

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

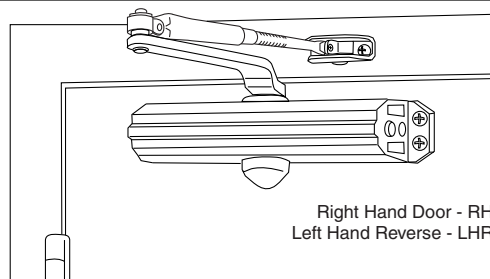
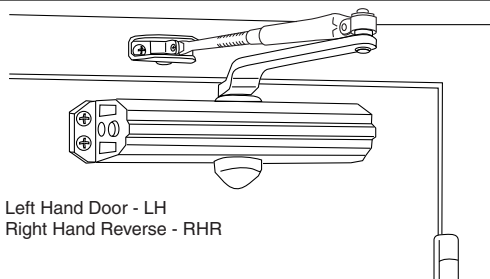
**CAUTION**

“DA” suffix (Delayed Action) is an optional feature. A separate instruction showing valve locations and adjustment procedures will be packed with these instructions.

## Regular Arm Installation

Closer on door on hinge (pull) side of door

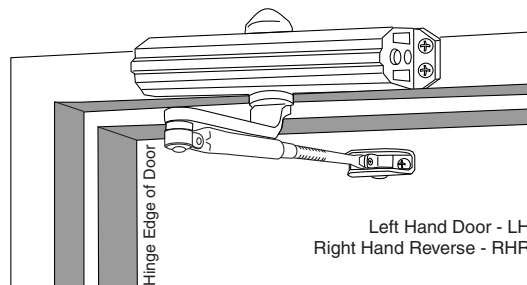
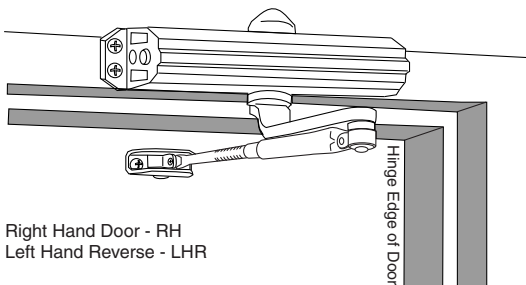
See Page 2



## Top Jamb Installation

Closer on frame on opposite to hinge (push) side of door

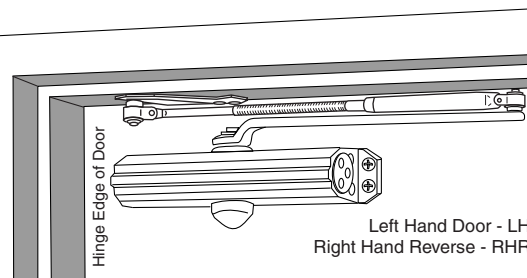
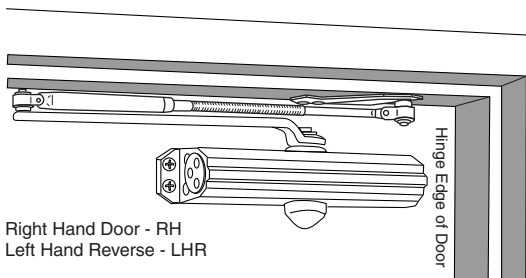
See Page 3



## Parallel Arm Installation

Closer on door on opposite to hinge (push) side of door

See Page 4

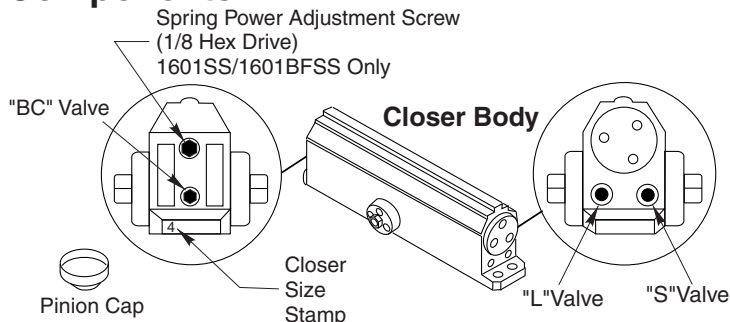


**NOTE:** For special applications a separate door and frame preparation template is packed with these instructions

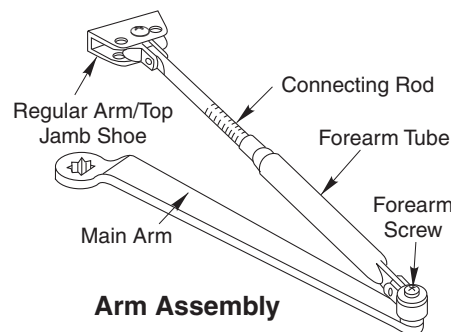
Use this instruction sheet for installation sequence and closer adjustments only

- It is recommended that the door on which the door closer will be installed be hung on ball bearing hinges. Door must swing freely
- A separate door stop, supplied by others, is recommended to prevent damage to the door closer, closer arm, or to the door, frame or adjacent walls.
- Door and Frame must be properly reinforced, or use of special fasteners employed, to prevent the mounting screws from pulling out.
- All dimensions are given in inches with corresponding metric dimensions (mm) in parenthesis.
- Door closer must not be installed on the exterior side of doors in exterior walls.

## Components:



## Soffit Plate

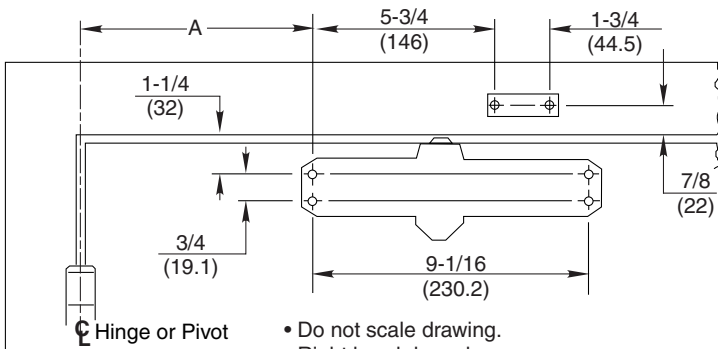


# Regular Arm Installation



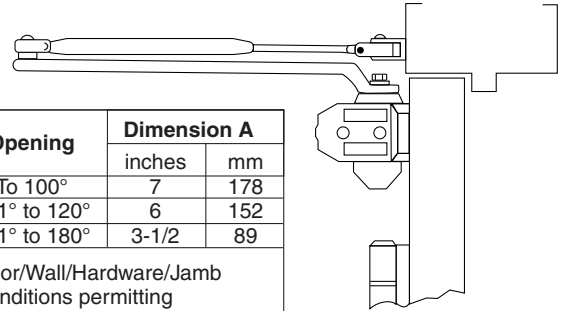
ASSA ABLOY

## Template



- Do not scale drawing.
- Right hand door shown.
- Dimensions are in inches (mm).

## Side Elevation



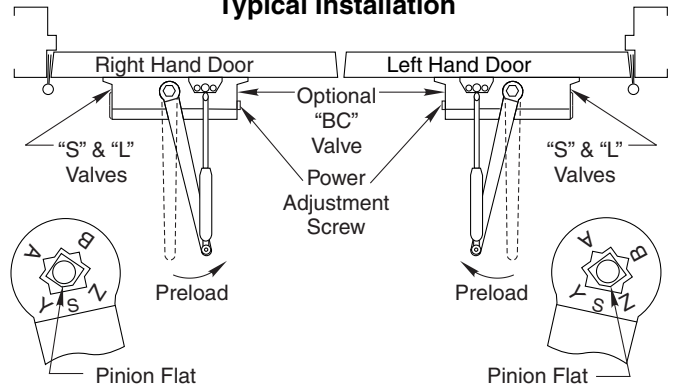
Opening	Dimension A	
	inches	mm
To 100°	7	178
101° to 120°	6	152
121° to 180°	3-1/2	89

\* Door/Wall/Hardware/Jamb conditions permitting

## Installation Sequence

- Select door opening angle using template above. Mark 4 holes on door for closer and 2 holes on frame face for arm shoe.
- Prepare door and frame for fasteners See "Preparation for Fasteners" below.
- **1601SS or 1601BFSS Models Only. Set approximate closing power using "Power Adjustment Chart" below right.**
- Install closer with "S" and "L" adjustment valves toward hinge edge of door.
- Disassemble arm at elbow (forearm screw).
- Install main arm onto closer pinion shaft, indexing main arm mark "S" with pinion flat as shown at right.
- Reassemble arm by adjusting the length of the forearm, to be perpendicular (at 90° angle) to the door when connected to the main arm (at the preload position).

## Typical Installation



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

## Preparation for Fasteners

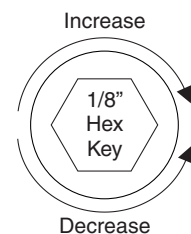
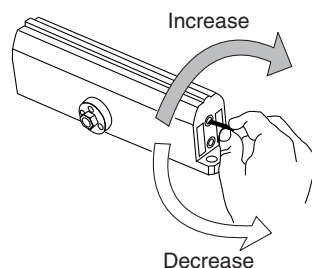
		Fasteners	Door or Frame	Drill-Sizes
Standard	1/4" - 20 machine screw		Aluminum or Metal	No drill required
			Wood	3/16" (4.30 mm) Pilot hole required
			Metal	Drill: #7 (0.201" dia.) Tap: 1/4" - 20
Optional	Sleeve nuts and bolts		Hollow Metal	9/32" (7 mm) through; 3/8" (9.5 mm) door face opposite to closer
			Aluminum or Wood	3/8" (9.5 mm) through
		Through-bolts and grommet-nuts	All	9/32" (7 mm); 3/8" (9.5 mm) dia. x 3/8" (9.5 mm) deep on door opposite to closer

## Door Closer Adjustment

### Power Adjustment Chart

DOOR	TYPE OF INSTALLATION	*	MAXIMUM DOOR SIZE				
			34" (0.85 m)	36" (0.9 m)	40" (1 m)	44" (1.1 m)	48" (1.2 m)
1601BFSS	REGULAR ARM TOP JAMB	FULL 360° TURNS OF POWER ADJUSTMENT SHAFT	1	1	2	3	3
	PARALLEL ARM		2	2	3	4	5
	REGULAR ARM TOP JAMB		5	6	NOT RECOMMENDED USE 1601SS		
	PARALLEL ARM		8	9	NOT RECOMMENDED USE 1601SS		
1601SS	REGULAR ARM TOP JAMB	FULL 360° TURNS OF POWER ADJUSTMENT SHAFT	2	4	6	9	11
	PARALLEL ARM		3	5	7	10	13
	REGULAR ARM TOP JAMB		3	5	7	10	13
	PARALLEL ARM		5	7	10	14	16

\*18 -360° TURNS MAXIMUM AVAILABLE

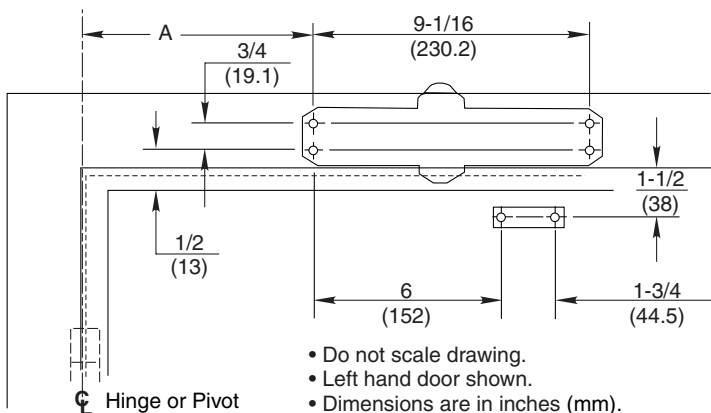


# Top Jamb Installation

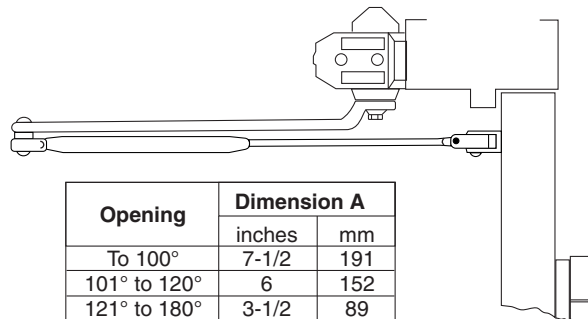


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## Template



## Side Elevation



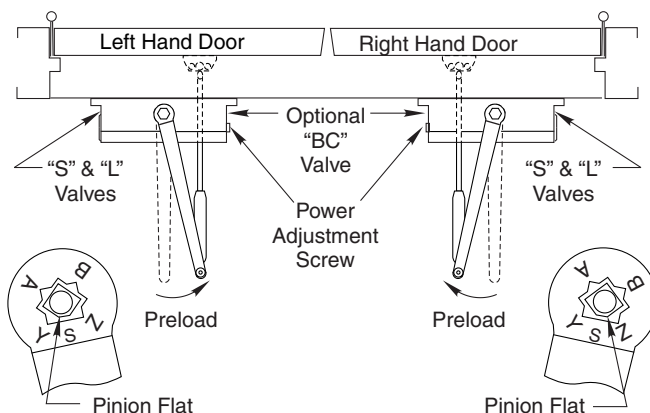
Opening	Dimension A	
	inches	mm
To 100°	7-1/2	191
101° to 120°	6	152
121° to 180°	3-1/2	89

\* Door/Wall/Hardware/Jamb conditions permitting

## Installation Sequence

- Select door opening angle using template above. Mark 4 holes on frame face for closer and 2 holes on door for arm shoe.
- Prepare door and frame for fasteners. See "Preparation for Fasteners" at bottom of Page 2.
- **1601SS or 1601BFSS Models Only. Set approximate closing power using "Power Adjustment Chart" at bottom of Page 2.**
- Install closer with "S" and "L" adjustment valves toward hinge edge of door.
- Remove forearm from arm assembly. Mount arm shoe to door.
- Install main arm onto closer pinion shaft, indexing main arm mark "S" with pinion flat as shown at right.
- Reassemble arm by adjusting the length of the forearm to be perpendicular (at a 90° angle) to the door, when connected to the main arm (at the preload position).
- Screw pinion cap onto pinion shaft by hand or with a Phillips screw driver - DO NOT OVER TIGHTEN.
- Adjust closer.

## Typical Installation



## Door Closer Adjustment (Continued)

"DA" suffix (Delayed Action) is an optional feature.

A separate instruction will be packed with these instructions showing valve locations and adjustment procedures.

### Closing Speed Control Figure 1

**CAUTION:**  
DO NOT BACK VALVES OUT OF CLOSER OR A LEAK WILL RESULT

Attention: Adjust Closing Speed Time to between 4 to 7 seconds from 90°. Use of the door by handicapped, elderly or small children may require greater closing time.

**Unit Adjustment**

- Valve "S" controls sweep range.
- Valve "L" controls latch range.

### Opening Door Control Figure 2

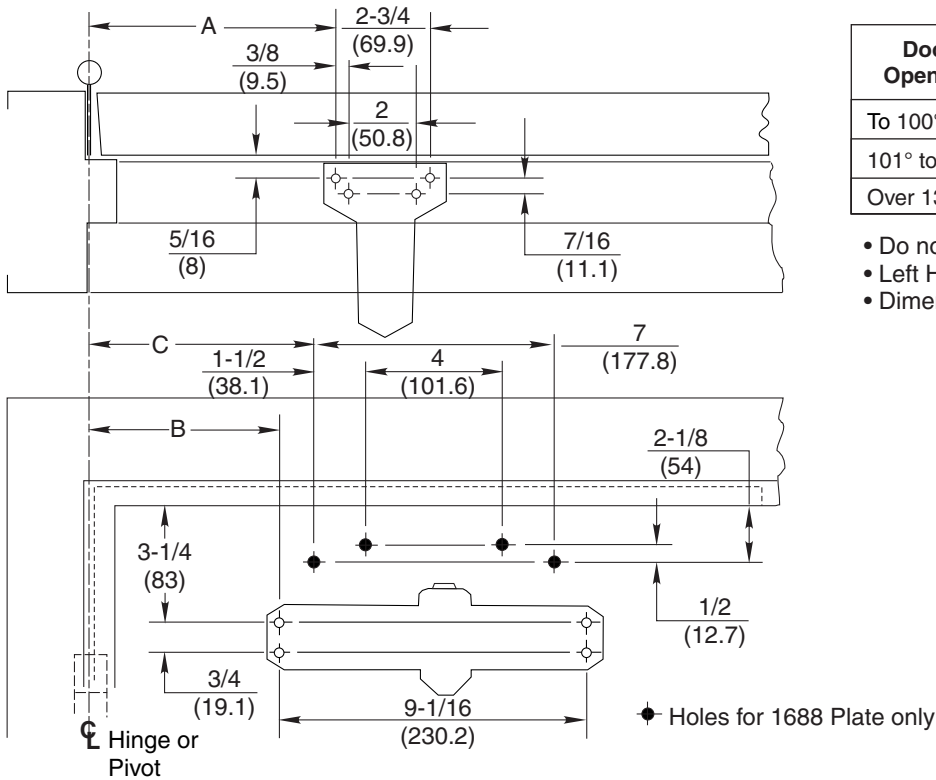
**CAUTION:**  
DO NOT BACK VALVES OUT OF CLOSER OR A LEAK WILL RESULT

**"BC" Valve**

- Backcheck ("BC") valve controls the hydraulic resistance to door opening in backcheck range. NEVER close this valve completely – it is not to provide a positive stop.

# Parallel Arm Installation

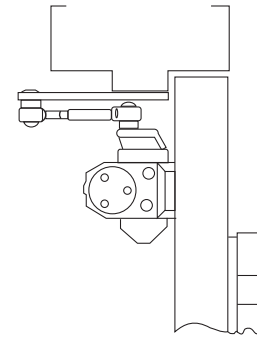
## Template



Door Opening	Dimension A		Dimension B		Dimension C	
	Inches	mm	Inches	mm	Inches	mm
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
Over 131°	5-3/4	146	4-1/8	105	5-1/8	130

- Do not scale drawing
- Left Hand shown
- Dimensions are in inches (mm)

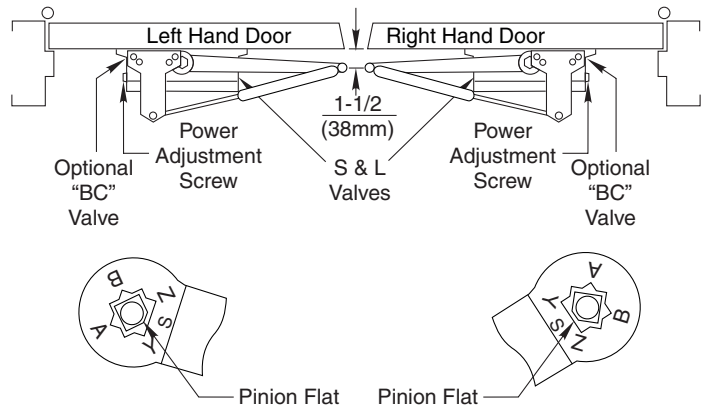
## Side Elevation



## Installation Sequence

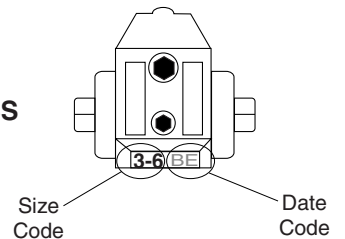
- Select door opening angle using template above. Mark 4 holes on door for closer or 1688 Drop Plate and 4 holes on frame for soffit plate.
- Prepare door and frame for fasteners. See "Preparation for Fasteners" bottom of Page 2.
- Mount soffit plate to frame.
- **1601SS or 1601BFSS Models Only. Set approximate closing power using "Power Adjustment Chart" at bottom of Page 2.**
- Mount closer to door with 2 regulating valves toward lock edge of door.
- Install main arm onto closer pinion shaft. Rotate pinion 45° toward hinge edge of door to align main arm letter "B" (right hand) or "A" (left hand) with pinion flat. Fasten with main arm screw.
- Fasten forearm to soffit plate. Adjust forearm length to set arm elbow about 1-1/2" (38mm) from door when connected to main arm.
- Screw pinion cap onto pinion shaft by hand or with a Phillips screw driver - DO NOT OVER TIGHTEN.
- Adjust closer. See closer adjustments on Pages 2 and 3.

## Typical Installation



## To identify your model:

- 2=1602BCSS    3-6=1601SS
- 3=1603BCSS    1-4=1601BFSS
- 4=1604BCSS
- 5=1605BCSS
- 6=1606BCSS



**Norton**

**ASSA ABLOY**

3000 Highway 74 East • Monroe, NC 28112  
Tel: (877)-974-2255 • Fax: (800)-338-0965  
[www.nortondoortcontrols.com](http://www.nortondoortcontrols.com)