



Installation Instructions

Parallel Rigid Arm Door Closers (PR) CloserPlus Door Closers (CLP)

Model Numbers Included:

Multi Size Closer	Sized Closer
PR1601/PR1601BF	PR160XBC
CLP1601/CLP1601BF	CLP160XBC

Note: "X" is Sized Closer number designates power size of closer 2, 3, 4, 5, or 6.

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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**

Additional Closer Options:

- "H" indicates Hold-Open function for "PR" arms. Arms are handed
- "T" indicates Thumbturn actuated Hold-Open control for "CLP" arms.

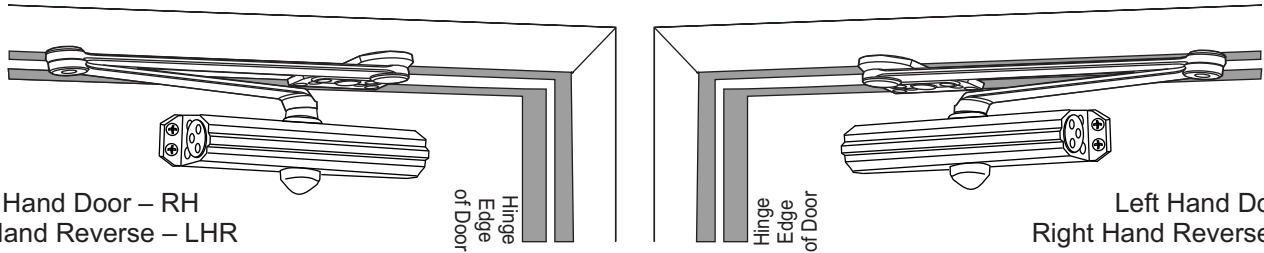
Optional Accessories:

- 1688 Drop plate
- 2019L, 6890, 6891 Soffit Plate Accessories.

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

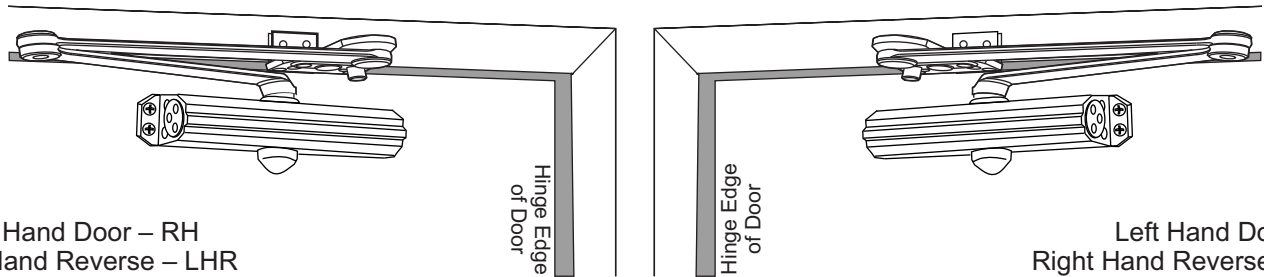
Standard Frame Installation

Closer mounts on opposite to hinge (push) side of door. Parallel Rigid Non Hold Open arm illustrated.
See Pages 3 and 4



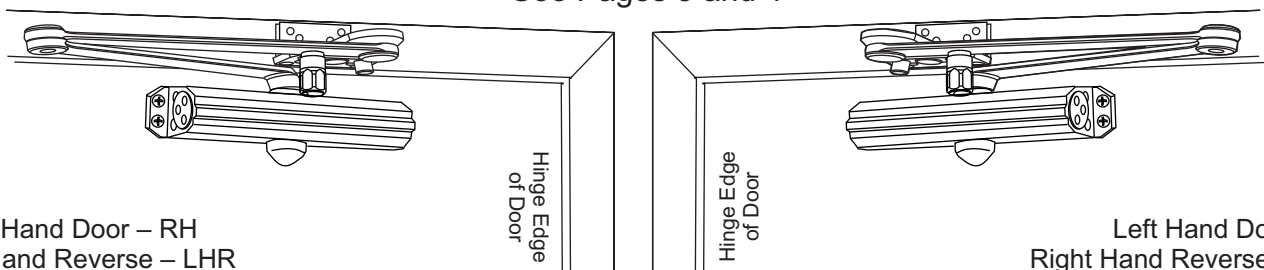
Narrow Frame Installation

Closer mounts on opposite to hinge (push) side of door. CloserPlus arm illustrated.
6890 and 6891 accessories required for this application (supplied separately).
See Pages 3 and 4



Flush Partition Installation

Closer mounts on opposite to hinge (push) side of door. CloserPlus arm with Thumbturn Hold Open illustrated.
2019L accessory required for this application (supplied separately).
See Pages 3 and 4



Components

Power Adjustment Shaft (1/8 Hex Drive) (1601 & 1601BF Only)

"BC" Valve

"L" Valve

"S" Valve

Closer Size Stamp

Screw Pack

Soffit Plate

2019S Block (provided)

Main Arm Screw

Closer Arm

Main Arm

Secondary Arm

Optional Accessories

For Blade Stop
6891 Spacer

For Frame or Blade Stop
6890 Bracket

For Flush Partition
2019L Bracket

Arm Options

Riveted Elbow

PR Non-Hold Open Arm Assembly

Removable Stop

Riveted Elbow

CLP Arm Assembly Stop only

Friction Hold Open Nut

Riveted Elbow

PR Hold Open Arm Assembly (Handed)

Optional 1688 Plate

Removable Stop

Thumbturn Hold Open

Riveted Elbow

CLP Arm Assembly with Thumbturn Hold-Open

Cover Options

1600P Cover

1639 Pinion Cap

Preparation for Fasteners			
	Fasteners	Door or Frame	Drill-Sizes
Standard	Self-Drilling Screw	Aluminum or Metal	No drill required
		Wood (see Note)	3/16" (4.30 mm)
	1/4" - 20 machine screw	Metal	Drill: #7 (0.201" dia.) Tap: 1/4" - 20
	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	
Optional	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

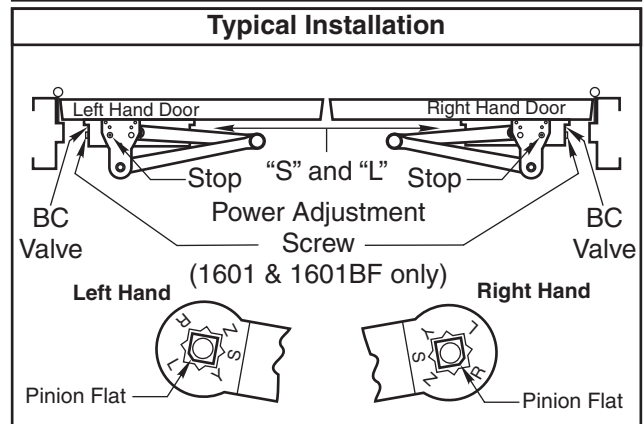
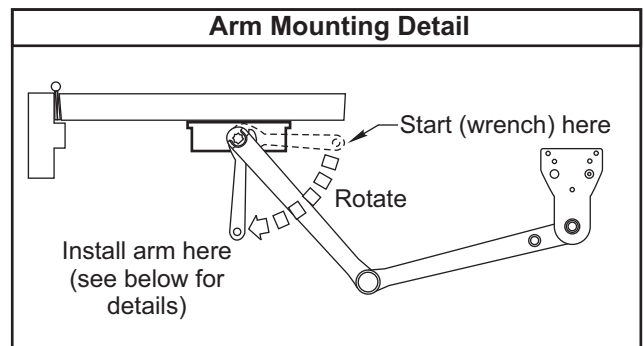
- Select angle of opening and use dimensions shown on Page 4 and Dimension Chart below to locate 4 holes on stop side of door for closer body (or 4 holes on stop side of door for 1688 drop plate, only if required, see Page 5), and 5 holes on stop and/or rabbet for Soffit Plate (or 4 holes on face of transom for 2019L bracket). For applications not covered in these instructions, a separate template will be required.
- Prepare door and frame for fasteners. See "Preparation for Fasteners", Page 2.
- **1601 and 1601BF closers only:** Set closer power for door size using Power Adjustment Chart below. Use 1/8" hex wrench supplied to adjust Power Adjustment Shaft ... 18 turns maximum. Turn nut **CLOCKWISE** to **Increase**, **COUNTER-CLOCKWISE** to **Decrease** power. See Page 6 for the illustration of this step.
- *Mount 1688 Drop plate ... only if required (see Page 5).*
- Install closer with **"S"** and **"L"** valves away from hinge edge of door. Note: If using cover, thread in screws before mounting closer. Leave enough gap between the head of the screw and the closer to slide the cover on.

- Install Main Arm: Close valves - 'S' and 'L', then turn pinion shaft more than 50° to permit proper alignment of arm mark with pinion flat -
 - 'L' for Left hand door.
 - 'R' for Right hand door.
 See "Main Arm Installation Instructions" below.
 - **Make closer adjustments** (see page 6) before installing cover ... **CAUTION: Do not back valves out of closer completely or a leak will result.**
- Caution: Closer arm is under spring tension and may be difficult to rotate.**
- Reopen valves by turning counter clockwise.
 - With door closed, align soffit plate with mounting holes in frame. Fasten soffit plate to frame with oval head screws provided.... use spacer blocks 2019S or 6891, if required.
 - If being used, slide the cover over the closer and secure the mounting screws after the closer has been mounted and adjusted.

Power Adjustment Chart							
DOOR	PARALLEL ARM INSTALLATION	*	MAXIMUM DOOR SIZE				
			34" (0.85 m)	36" (0.9 m)	40" (1 m)	44" (1.1 m)	48" (1.2 m)
INT	PR1601BF/ CLP1601BF	FULL 360° TURNS OF POWER ADJUSTMENT SHAFT	2	2	3	4	5
EXT			8	9	NOT RECOMMENDED USE PR1601/CLP1601		
INT	PR1601/ CLP1601		3	5	7	10	13
EXT			5	7	10	14	16

*18 -360° TURNS MAXIMUM AVAILABLE (Door is shipped at mid range)

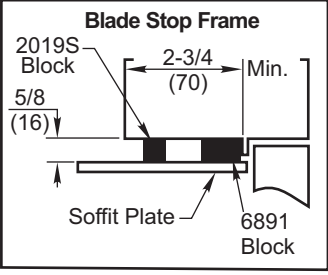
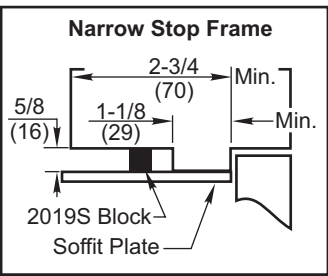
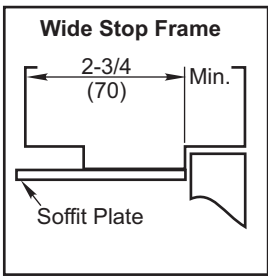
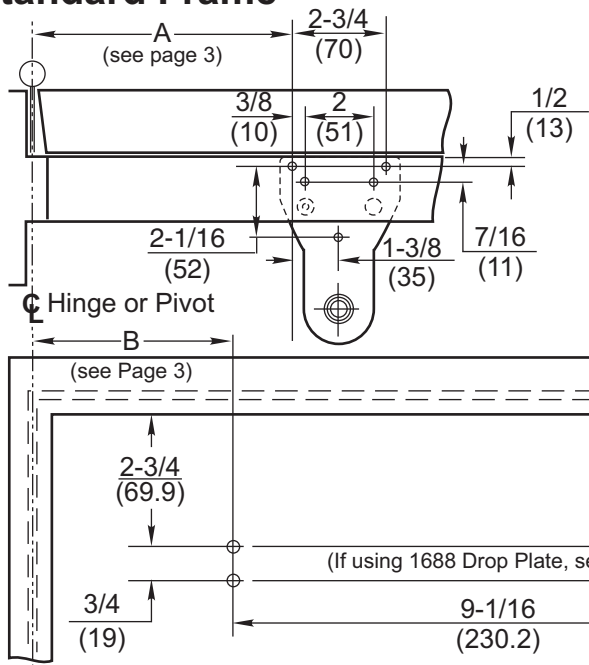
Installation Dimensions Chart										
		Dim	Up to 85°	85°- 90°	90°- 95°	95°- 100°	100°- 105°	105°- 110°	110°- 130°	130°- 180°
PR1601/ PR160XBC	Standard and Narrow Frame	A in. (mm)	9-5/8 (244)			8-1/8 (206)			6-1/8 (156)	
		B in. (mm)	7-5/8 (194)			6-1/8 (156)			4-1/8 (105)	
		C in. (mm)	8-5/8 (219)			7-1/8 (181)			5-1/8 (130)	
	Flush Partition	A in. (mm)	9-3/4 (248)			8-1/4 (210)			6-1/4 (159)	
		B in. (mm)	7-5/8 (194)			6-1/8 (156)			4-1/8 (105)	
		C in. (mm)	8-5/8 (219)			7-1/8 (181)			5-1/8 (130)	
CLP1601/ CLP160XBC	Standard and Narrow Frame	A in. (mm)	11-1/8 (283)	10-3/8 (264)	9-5/8 (244)	9 (229)	8-3/8 (213)	7-3/4 (197)		
		B in. (mm)	9-1/8 (232)	8-3/8 (213)	7-5/8 (194)	7 (178)	6-3/8 (162)	5-3/4 (146)		
		C in. (mm)	10-1/8 (257)	9-3/8 (238)	8-5/8 (219)	8 (203)	7-3/8 (187)	6-3/4 (171)		
	Flush Partition	A in. (mm)	11-1/4 (286)	10-1/2 (267)	9-3/4 (248)	9-1/8 (232)	8-1/2 (216)	7-7/8 (200)		
		B in. (mm)	9-1/8 (232)	8-3/8 (213)	7-5/8 (194)	7 (178)	6-3/8 (162)	5-3/4 (146)		
		C in. (mm)	10-1/8 (257)	9-3/8 (238)	8-5/8 (219)	8 (203)	7-3/8 (187)	6-3/4 (171)		



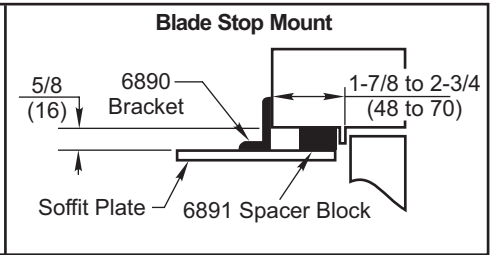
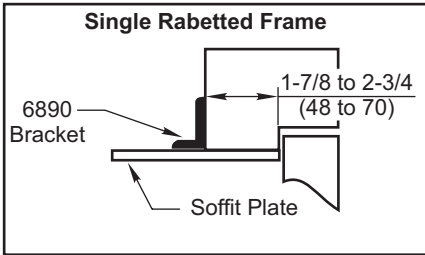
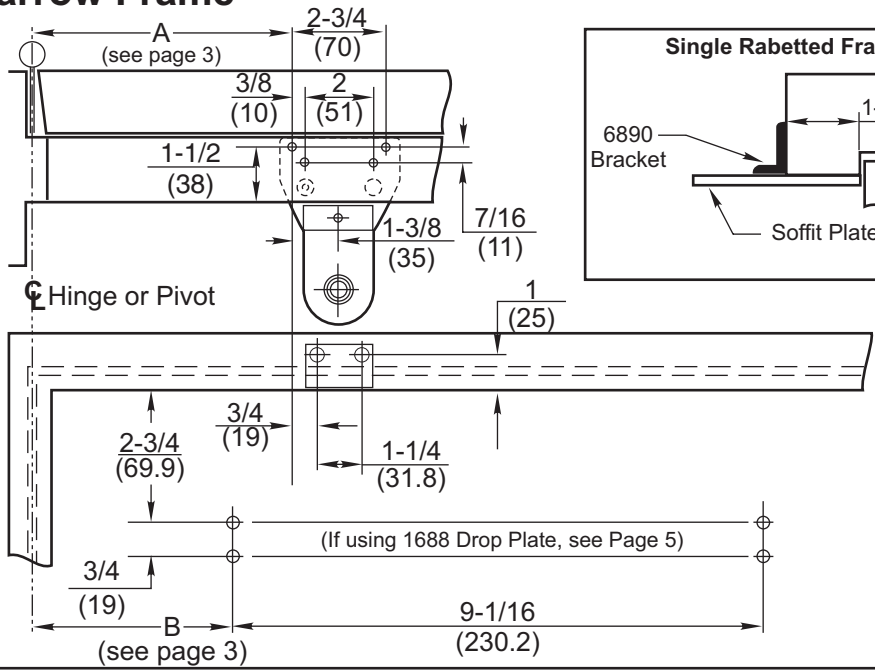
Standard Frame



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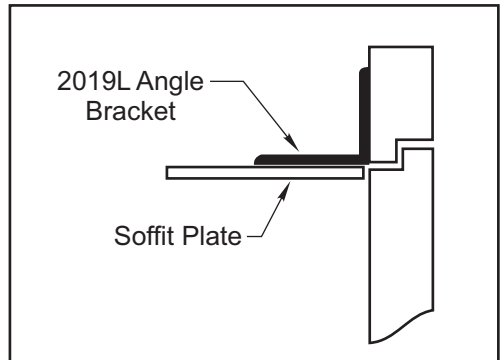
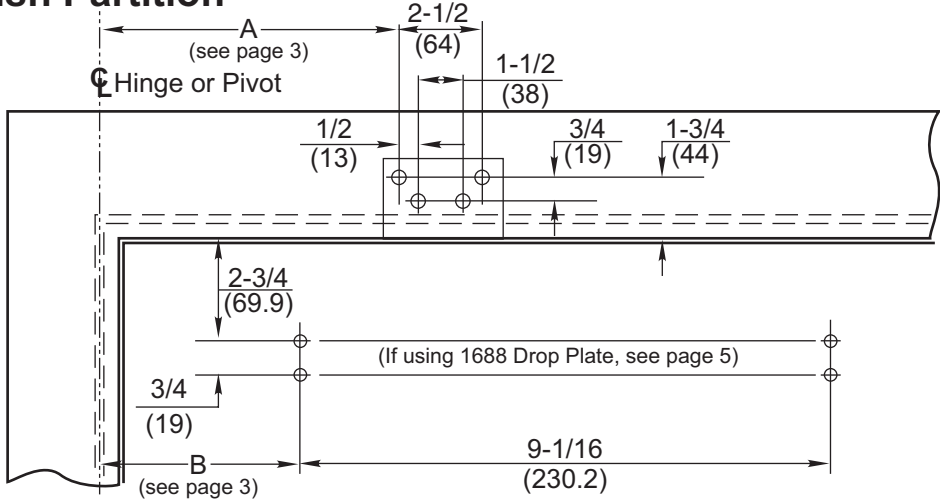


Narrow Frame



Notes:
 Do Not Scale Drawing.
 Left Hand Door Shown.
 Same dimensions apply for Right Hand Door measured from centerline of pivot point.
 Dimensions are in inches (mm).
 See Page 3 for A & B dimension values.

Flush Partition

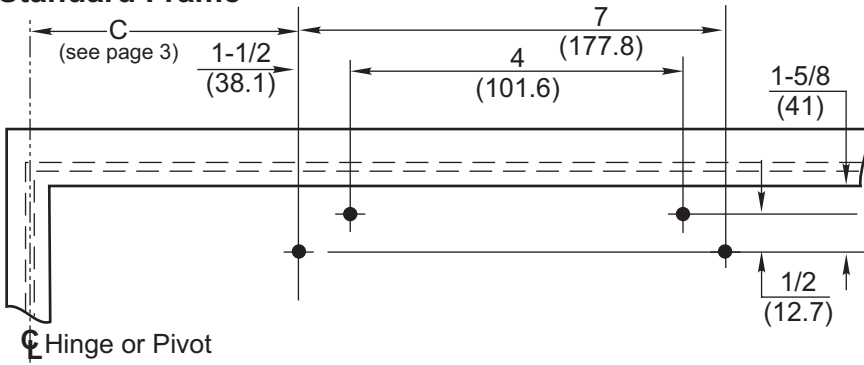


1688 Drop Plate Mounting Holes

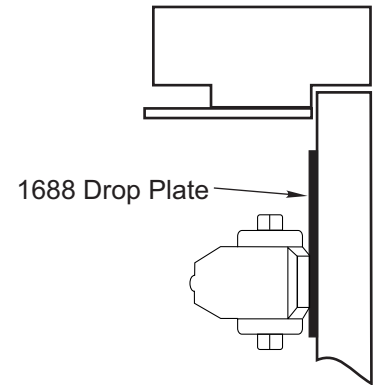


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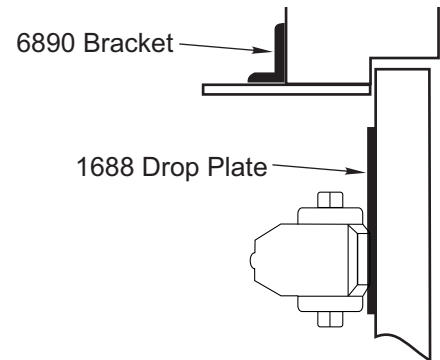
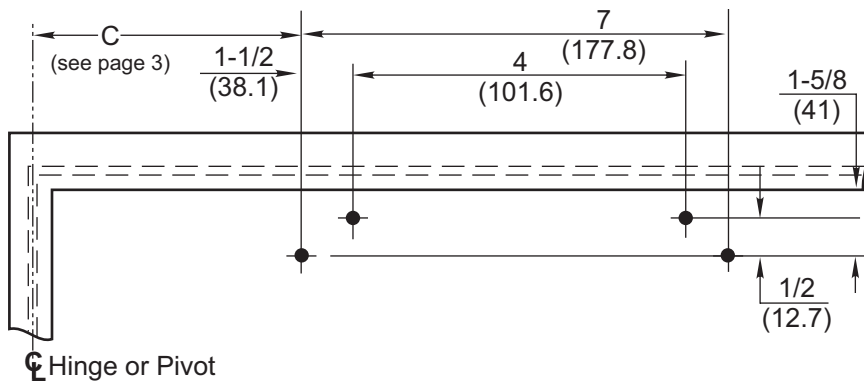
Standard Frame



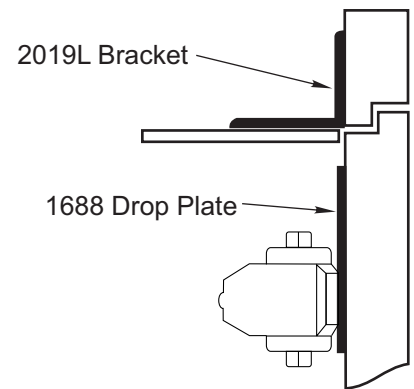
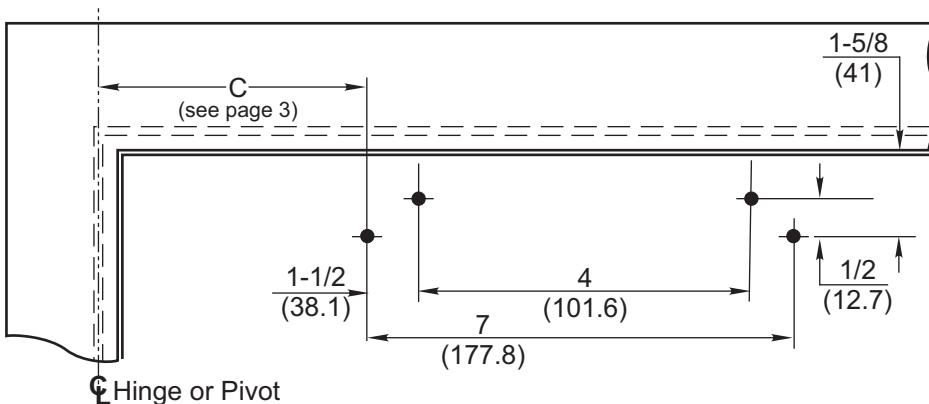
Notes:
 Left Hand Door Shown.
 Same dimensions apply for Right Hand Door measured from centerline of pivot point.
 Dimensions are in inches (mm).
 See Page 3 for C dimension values.



Narrow Frame



Flush Partition



Thumbturn Hold-Open Feature

The Thumbturn Hold-Open feature is controlled by the knob located on the arm of the unit. Turning this knob clockwise will engage the Hold-Open mechanism and increase the Hold-Open force. Turning this knob counterclockwise will reduce the Hold-Open force and disengage the Hold-Open mechanism.

DECREASE -- INCREASE

Thumbturn Action
 (Units suffixed "T")



Friction Hold-Open Feature

Hold door open to opening angle desired and tighten holder-adjustment-nut (wrench supplied) or use 1" Box or Open End wrench.



Unit Adjustment

Closing Power Adjustment–

Using “Power Adjustment Chart” from Page 3, select the correct number of turns for power adjustment shaft that corresponds with the installation. With 1/8” hex-key provided, rotate adjustment shaft full 360° clockwise turns to desired setting. After closer has been installed and proper adjustments made to the sweep and latch, it may be necessary to readjust spring power for good closing action.

Control Valve Adjustments

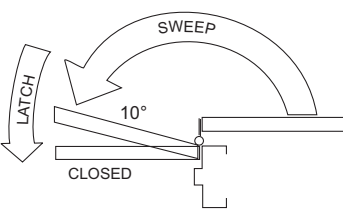
(See Figure 2.)

Closing Speed Controls (Figure 1 and 2.)

Valve “S” Controls Sweep Range.

Valve “L” Controls Latch Range.

Closing Speed Controls **Figure 1.**




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

Standard Closing Cycle

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.

Closing Speed Controls **Figure 2.**



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

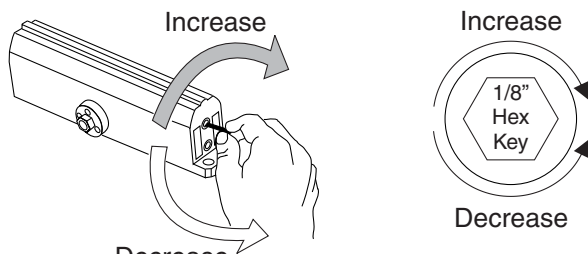
Slow

Fast

"L" Valve "S" Valve

Closing Power Control **Figure 3.**

See “Power Adjustment Chart” Page 3



Increase

Decrease

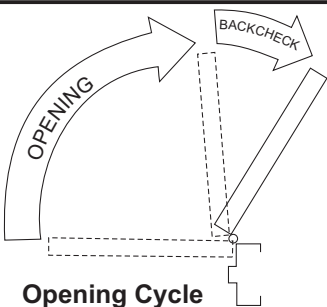
1/8" Hex Key

Decrease

Opening Cycle

“Backcheck” valve controls the strength of cushioning in Backcheck Range (approximately 70° to maximum swing). NEVER close this valve completely – it is not to provide a positive stop. (see Figure 4 and Figure 5).

Opening Door Control **Figure 4.**

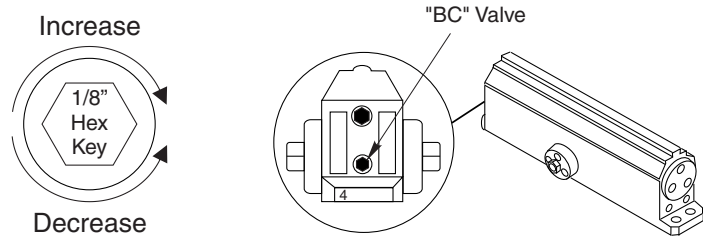


CAUTION:
DO NOT BACK VALVES OUT OF CLOSER OR A LEAK WILL RESULT.

NEVER CLOSE BC VALVE COMPLETELY - NOT INTENDED TO PROVIDE A POSITIVE STOP.

Opening Cycle

Backcheck Control **Figure 5.**



Increase

Decrease

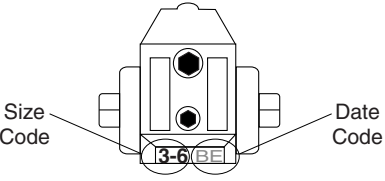
"BC" Valve

1/8" Hex Key

Model Identification **Figure 6.**


To identify your model:

1 - 4 = 1601BF
3 - 6 = 1601
2 = 1602BC
3 = 1603BC
4 = 1604BC
5 = 1605BC
6 = 1606BC



Size Code

Date Code



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