



Installation Instructions

80-9350-2530-010 (06-09)

Model Numbers Included:

PR50(BF) / PR150(BF)

5120(BF)(T)

Parallel Rigid Arm Door Closers
with or without Stop

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:

- "DL" indicates Delayed Action closing.
- "H" indicates Hold-Open function. These components are handed
- "T" indicates Thumbturn actuated Hold-Open control.

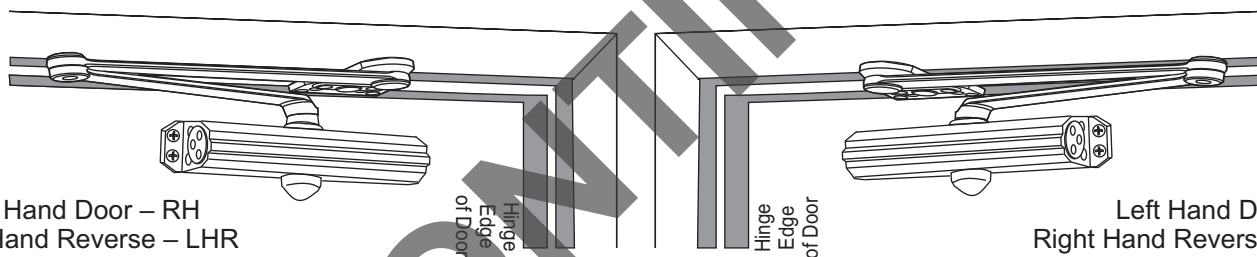
Optional Accessories:

- 213 Dropplate
- 293L, 890, 891 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.

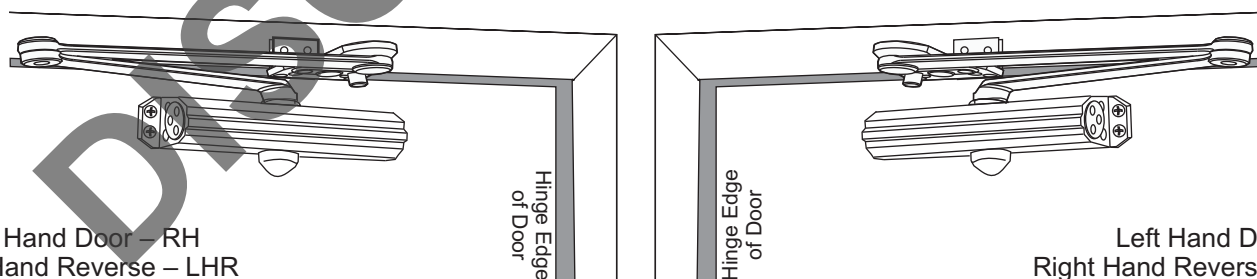
Standard Frame Installation

Closer mounts on opposite to hinge (push) side of door. PR51 Parallel Rigid Non Hold Open arm illustrated. See Pages 3 and 4



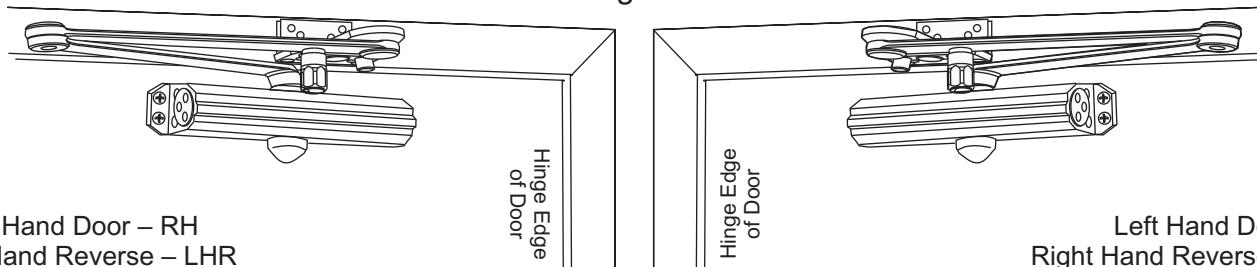
Narrow Frame Installation

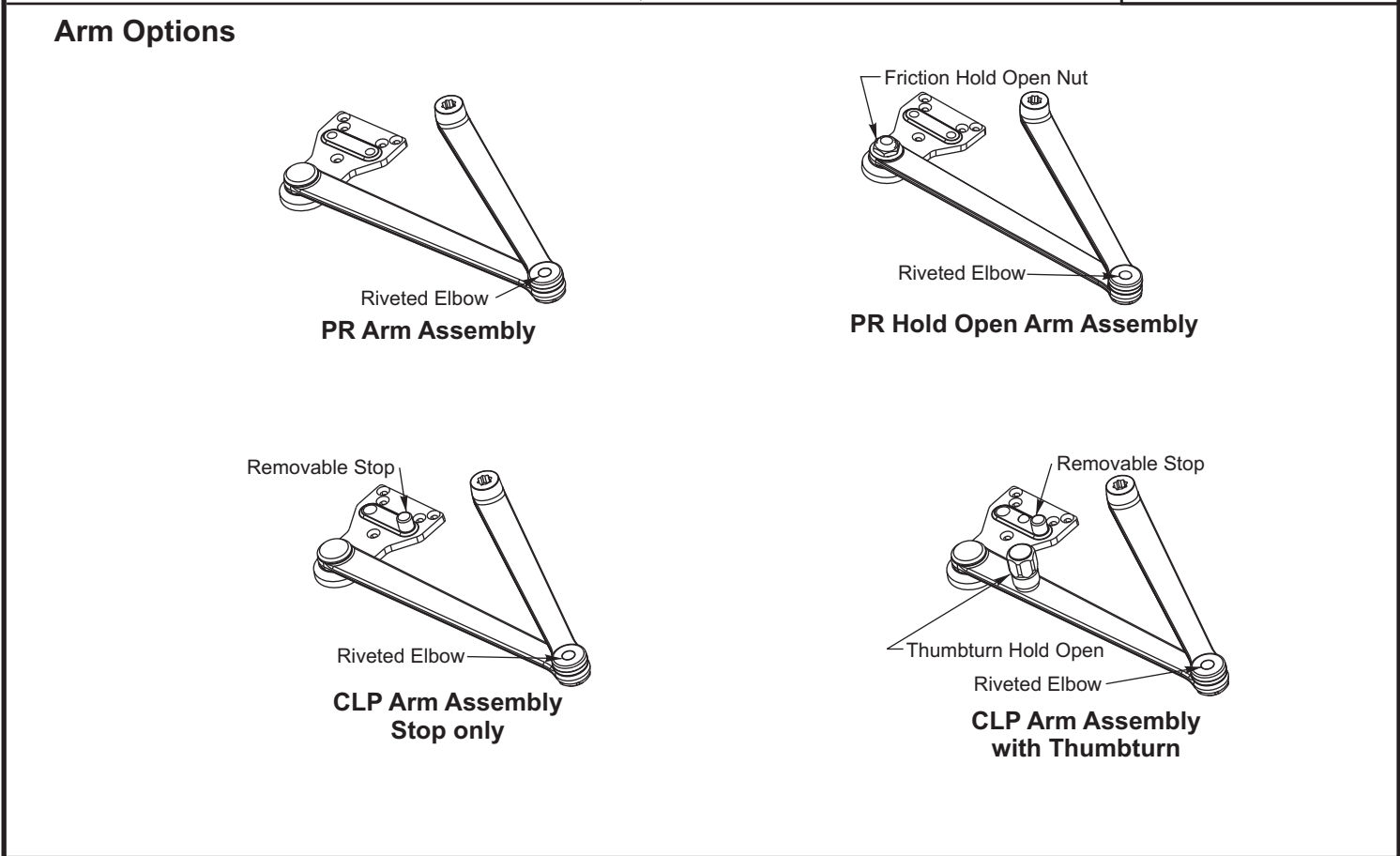
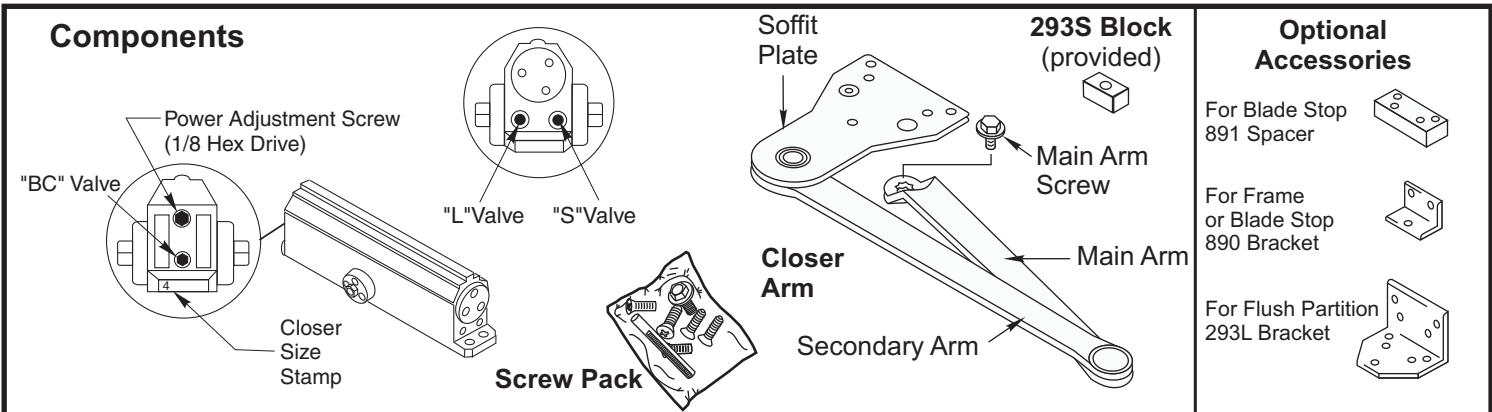
Closer mounts on opposite to hinge (push) side of door. 5121 Parallel Rigid arm with stop 890 and 891 accessories required for this application (supplied separately). See Pages 3 and 4



Flush Partition Installation

Closer mounts on opposite to hinge (push) side of door. 5121T Parallel Rigid arm with Thumbturn Hold Open illustrated. 293L accessory required for this application (supplied separately). See Pages 3 and 4





Preparation for Fasteners			
	Fasteners	Door or Frame	Drill-Sizes
Standard	Self-Drilling Screw	Aluminum or Metal	No drill required
		Wood	3/16" (4.30 mm)
	1/4" - 20 machine screw	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

Note: Wood doors **MUST** be pre-drilled when using Self-Drilling Screws.

Installation Instructions

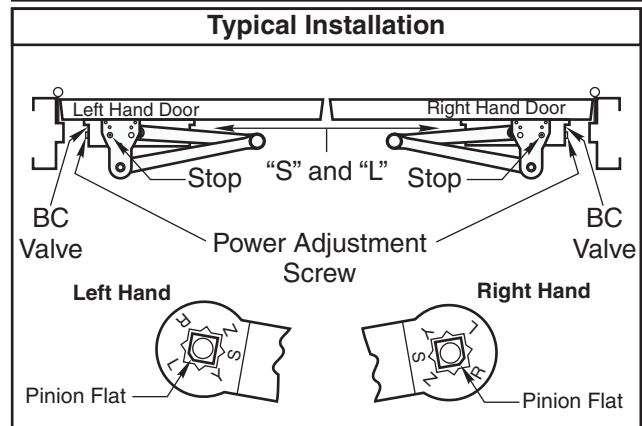
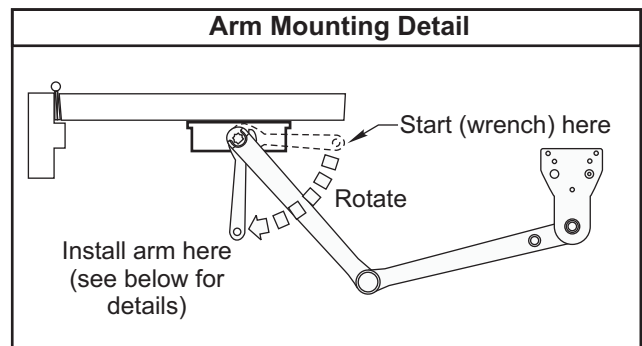
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- Select angle of opening and use dimensions shown on Page 4 and Dimension Chart below to locate 4 holes on stop side of door for closer body or 213 dropplate, *only if required* and 5 holes on stop and/or rabbet for Soffit Plate. For applications not covered in these instructions, a separate template will be required.
- Prepare door and frame for fasteners. See "Preparation for Fasteners", Page 2.
- Set closer power for door size using Power Adjustment Chart below. Use 1/8" hex wrench supplied to adjust Power Adjustment Shaft ... 15 turns maximum. Turn nut **CLOCKWISE** to **Increase**, **COUNTER-CLOCKWISE** to **Decrease** power. See Page 6 for the illustration of this step.
- Mount 213 Dropplate ... *only if required* (see Page 5).
- Install closer with **power adjustment screw toward 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.
- With door closed, use wrench to rotate pinion shaft as illustrated below, see Arm Mounting Details. **Caution: Closer arm is under spring tension and may be difficult to rotate.**
- 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.**
- Reopen valves by turning counter clockwise.
- With door closed, align soffit plate with mounting holes in frame. Fasten soffit plate to frame with flat head screws provided.... *use spacer blocks 293S or 891, if required.*

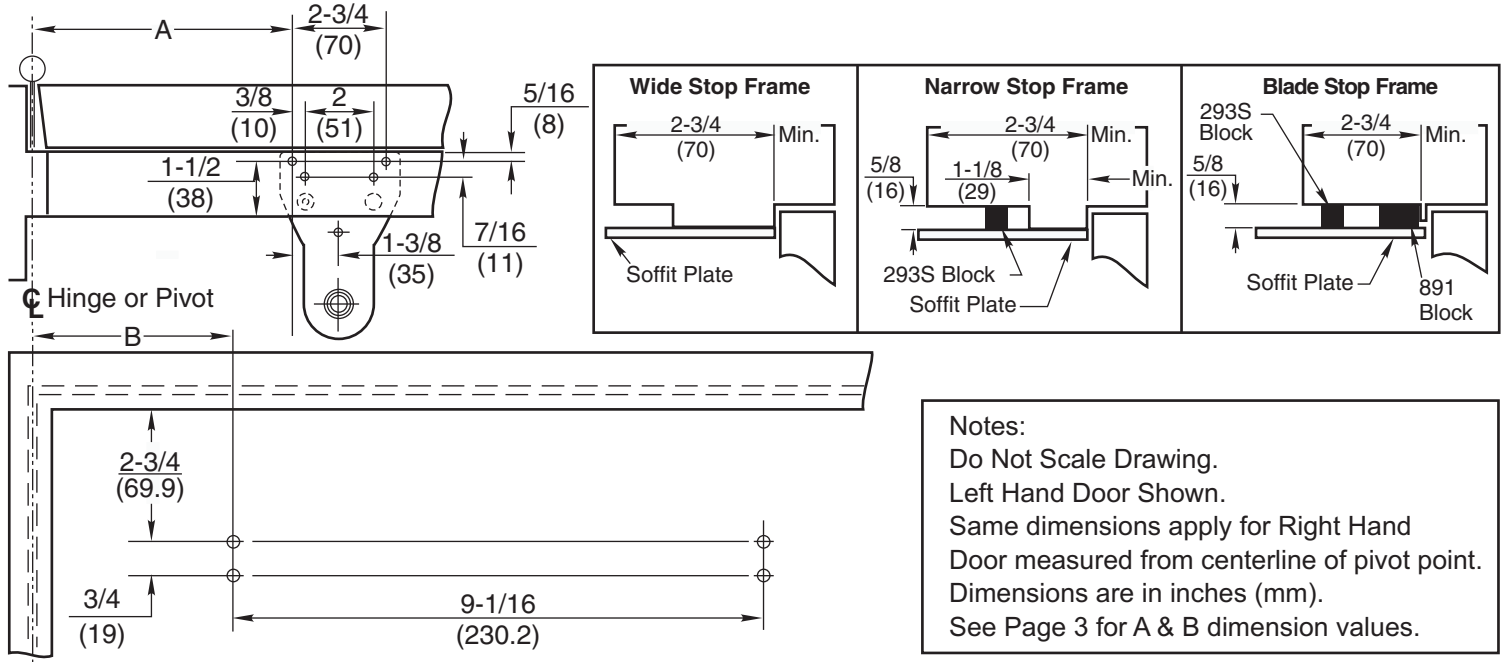
Power Adjustment Chart							
DOOR	PARALLEL ARM INSTALLATION	*	MAXIMUM DOOR SIZE				
			34" (0.85 m)	36" (0.9 m)	40" (1 m)	44" (1.1 m)	48" (1.2 m)
INT	PR51BF / PR151BF / 5121BF	FULL 360° TURNS OF POWER ADJUSTMENT SHAFT	2	2	3	4	5
EXT			8	9	12	NOT RECOMMENDED USE PR1601/CLP1601	
INT	PR51 / PR151 / 5121		3	5	7	10	13
EXT			5	7	10	14	16

*18 -360° TURNS MAXIMUM AVAILABLE

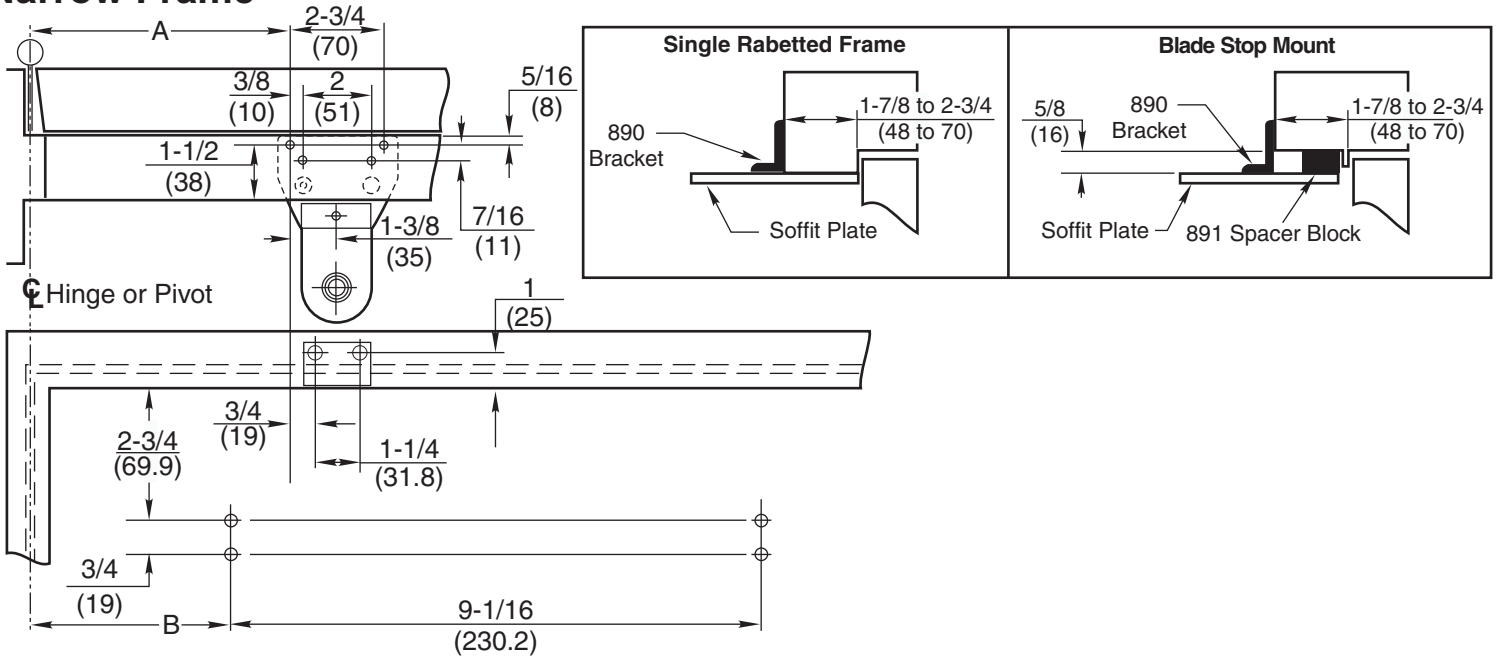
Installation Dimensions Chart										
		Dim	Up to 85°	85°- 90°	90°- 95°	95°- 100°	100°- 105°	105°- 110°	110°- 130°	130°- 180°
PR50 / PR150	Standard and Narrow Frame	A in.	9-5/8				8-1/8		6-1/8	
		B in.	7-5/8				6-1/8		4-1/8	
		C in.	8-5/8				7-1/8		5-1/8	
	Flush Partition	A in.	9-3/4				8-1/4		6-1/4	
		B in.	7-5/8				6-1/8		4-1/8	
		C in.	8-5/8				7-1/8		5-1/8	
5120	Standard and Narrow Frame	A in.	11-1/8	10-3/8	9-5/8	9	8-3/8	7-3/4		
		B in.	9-1/8	8-3/8	7-5/8	7	6-3/8	5-3/4		
		C in.	10-1/8	9-3/8	8-5/8	8	7-3/8	6-3/4		
	Flush Partition	A in.	11-1/4	10-1/2	9-3/4	9-1/8	8-1/2	7-7/8		
		B in.	9-1/8	8-3/8	7-5/8	7	6-3/8	5-3/4		
		C in.	10-1/8	9-3/8	8-5/8	8	7-3/8	6-3/4		



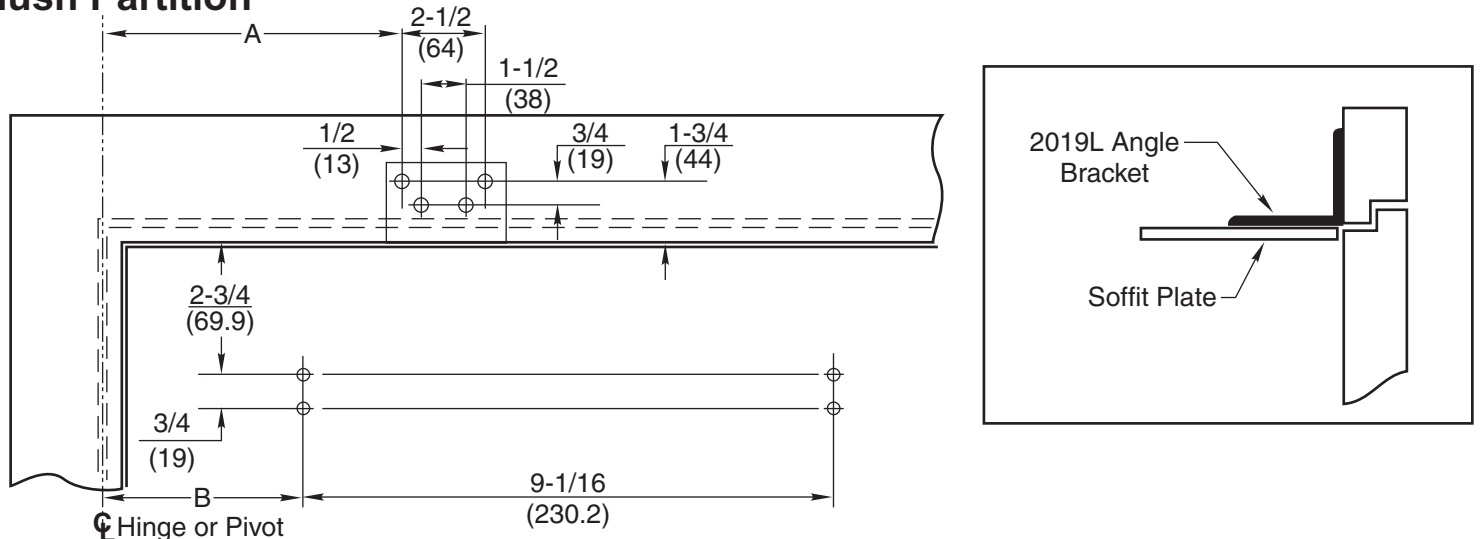
Standard Frame



Narrow Frame



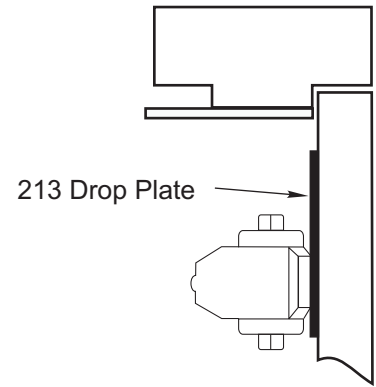
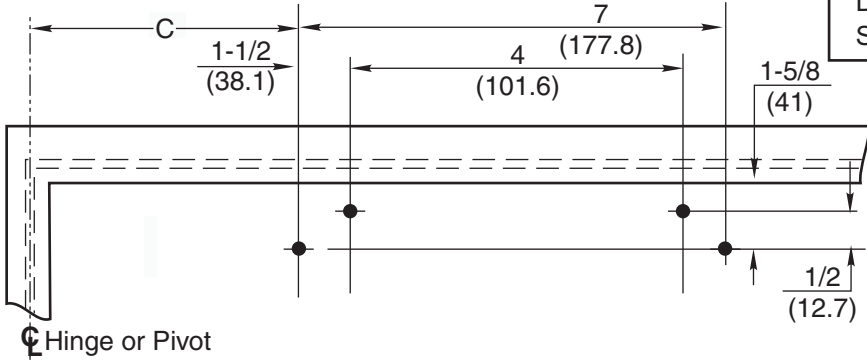
Flush Partition



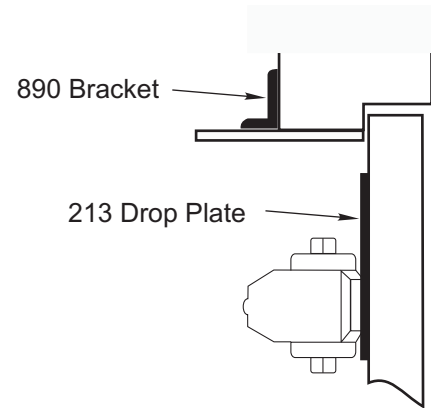
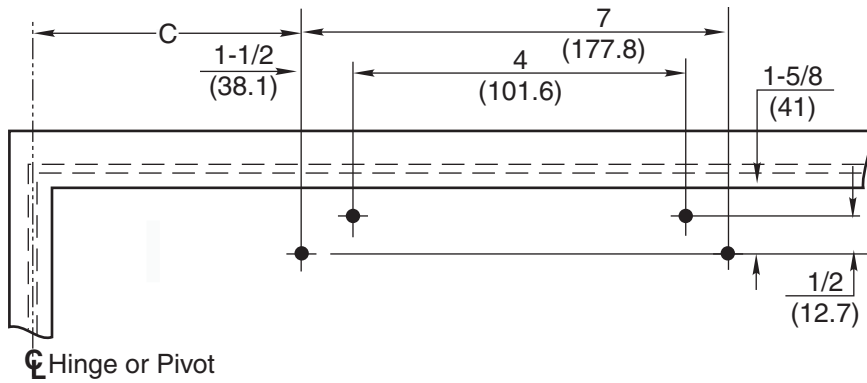
213 Drop Plate Mounting Holes

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

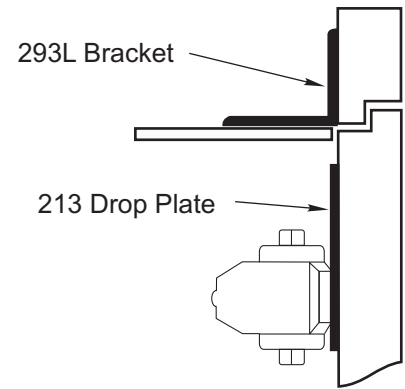
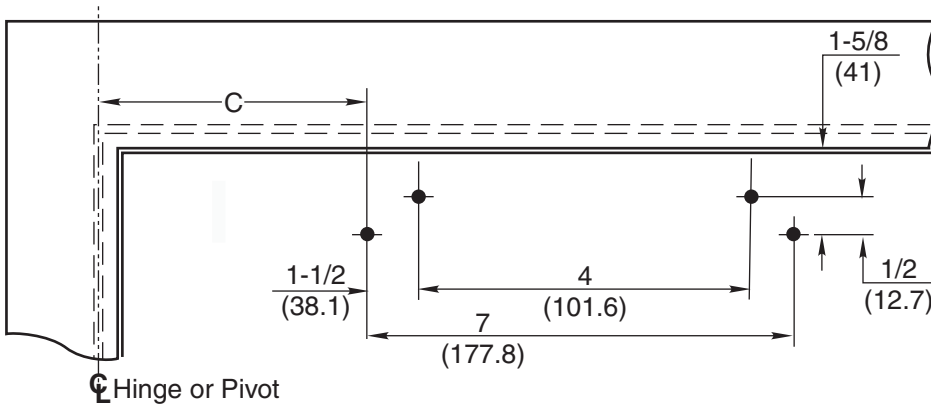
Standard Frame



Narrow Frame



Flush Partition

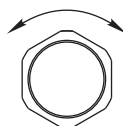


Thumbturn Hold-Open Feature

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

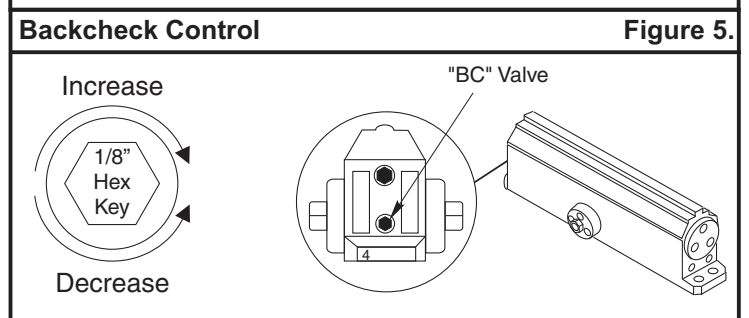
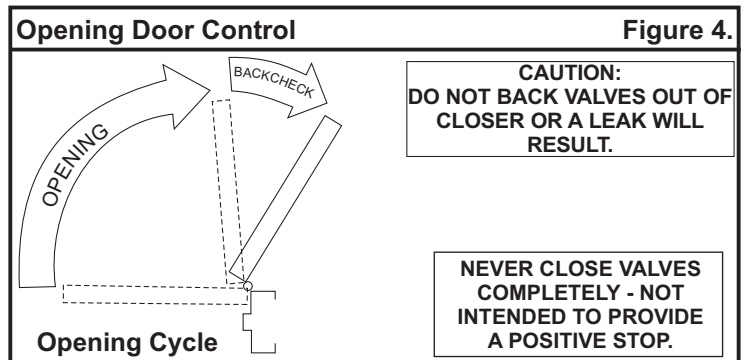
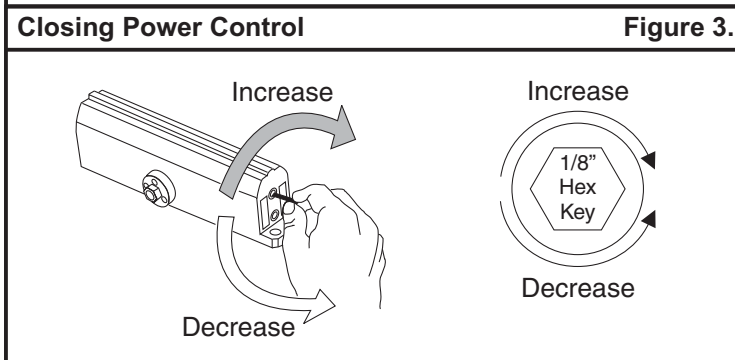
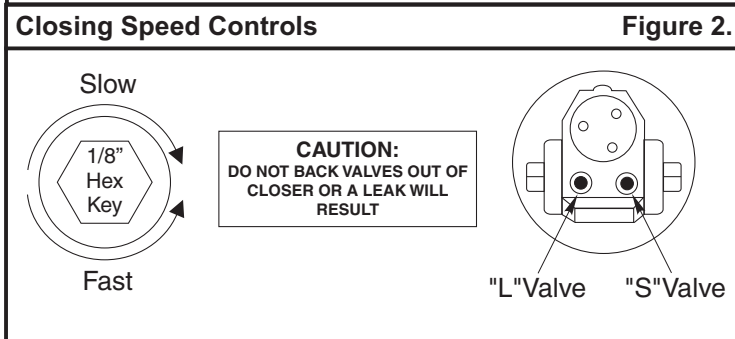
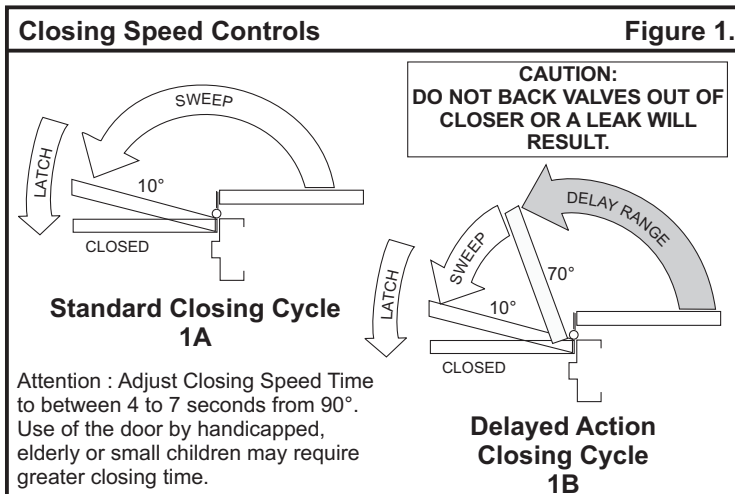
(See Figure 2.)

Closing Speed Controls (Figure 1A or 1B and 2.)

- Valve “S” Controls Sweep Range.
- Valve “L” Controls Latch Range.

Opening Cycle

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



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