Installation Instructions

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

Model Numbers Included:

PR8101(H) / PR810X(H)
PR8301(H) / PR830X(H)
PR8501(H) / PR850X(H)
CLP8101(T) / CLP810X(T)
CLP8301(T) / CLP830X(T)
CLP8501(T) / CLP850X(T)

Note 'X' Designates Size 2, 3, 4, 5, or 6

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:
- "DA" indicates Delayed Action closing.
- "H" indicates Hold-Open function for "PR" prefix units. The arm is handed.
- "T" indicates Thumbturn actuated Hold-Open control for "CLP" prefix units.

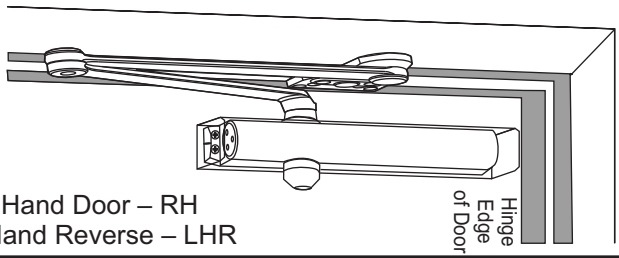
Optional Accessories:
- 8148 Drop plate
- 2019L, 6890, 6891 Soffit Plate Accessories.

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.

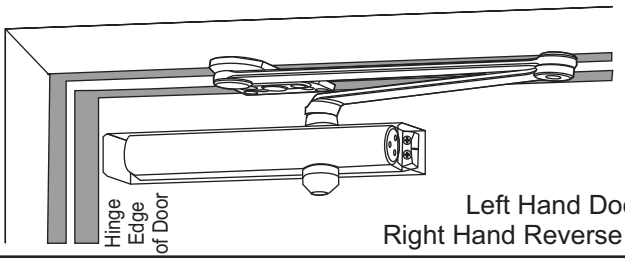
Standard Frame Installation

Closer mounts on opposite to hinge (push) side of door. PR8300 Parallel Rigid Non Hold Open arm illustrated. Slim Line Cover shown.

See Pages 3 and 4



Right Hand Door – RH
Left Hand Reverse – LHR

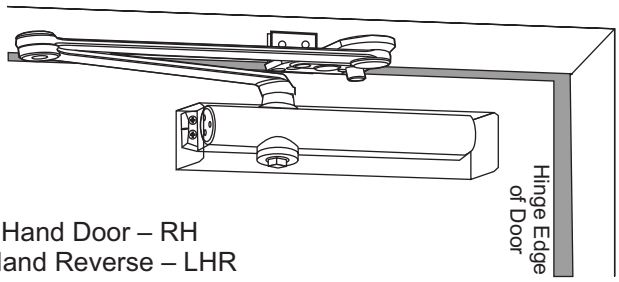


Left Hand Door – LH
Right Hand Reverse – RHR

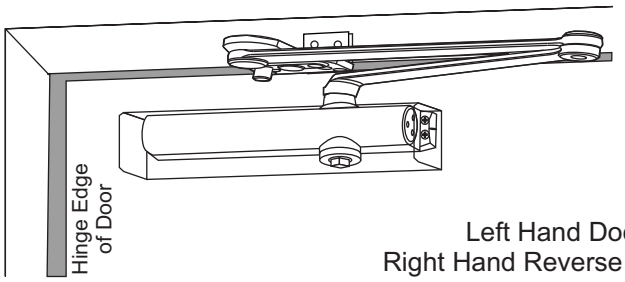
Narrow Frame Installation

Closer mounts on opposite to hinge (push) side of door. CLP8500 CloserPlus arm illustrated. Full Cover shown.
6890 and 6891 accessories required for this application (supplied separately).

See Pages 3 and 4



Right Hand Door – RH
Left Hand Reverse – LHR

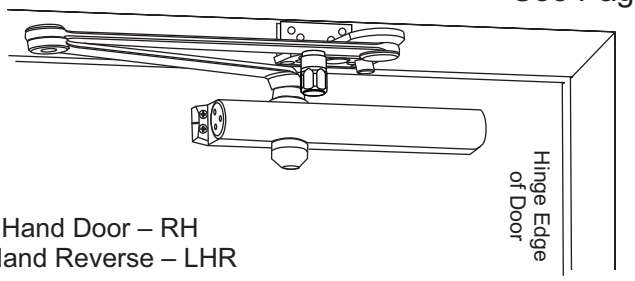


Left Hand Door – LH
Right Hand Reverse – RHR

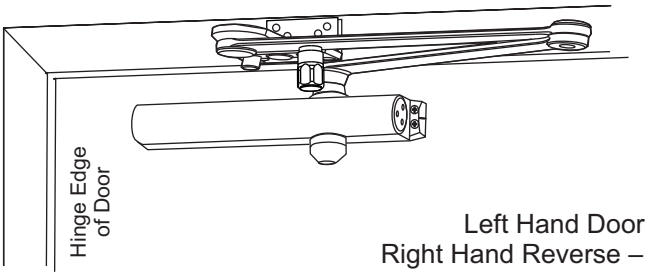
Flush Partition Installation

Closer mounts on opposite to hinge (push) side of door. CLP8100T CloserPlus arm with Thumbturn Hold Open illustrated.
Closer Cover not shown. 2019L accessory required for this application (supplied separately).

See Pages 3 and 4



Right Hand Door – RH
Left Hand Reverse – LHR

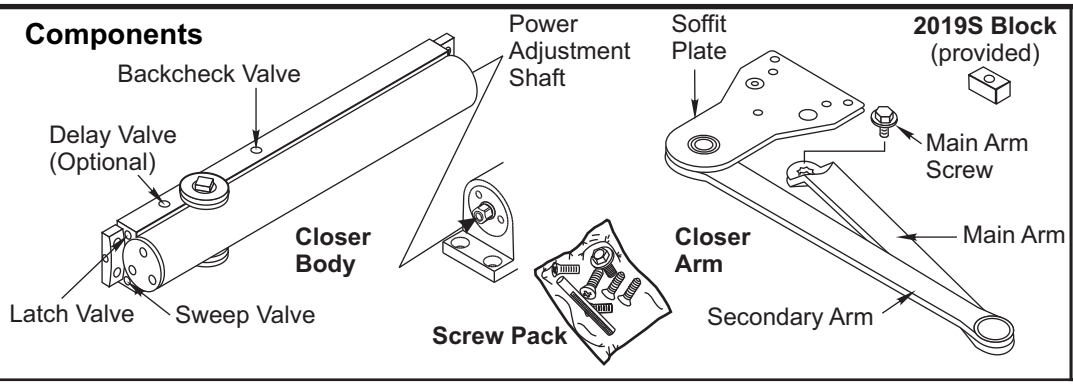


Left Hand Door – LH
Right Hand Reverse – RHR

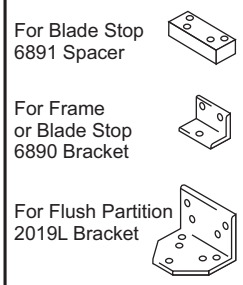
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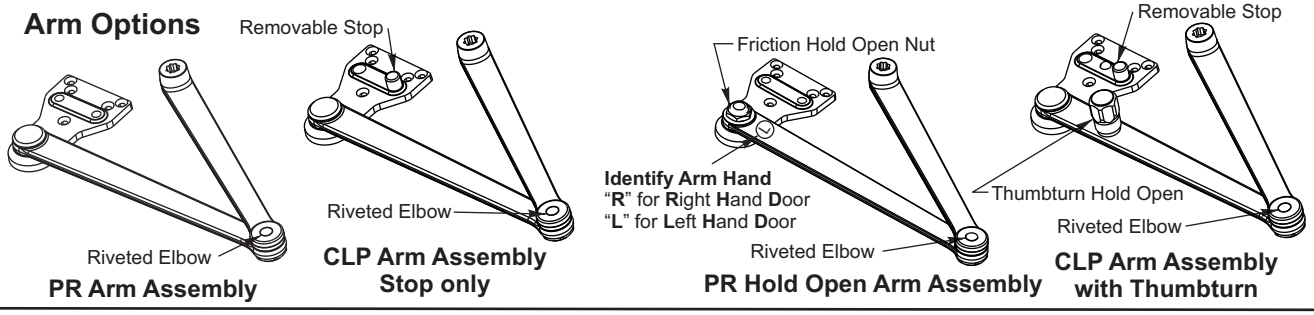
Components



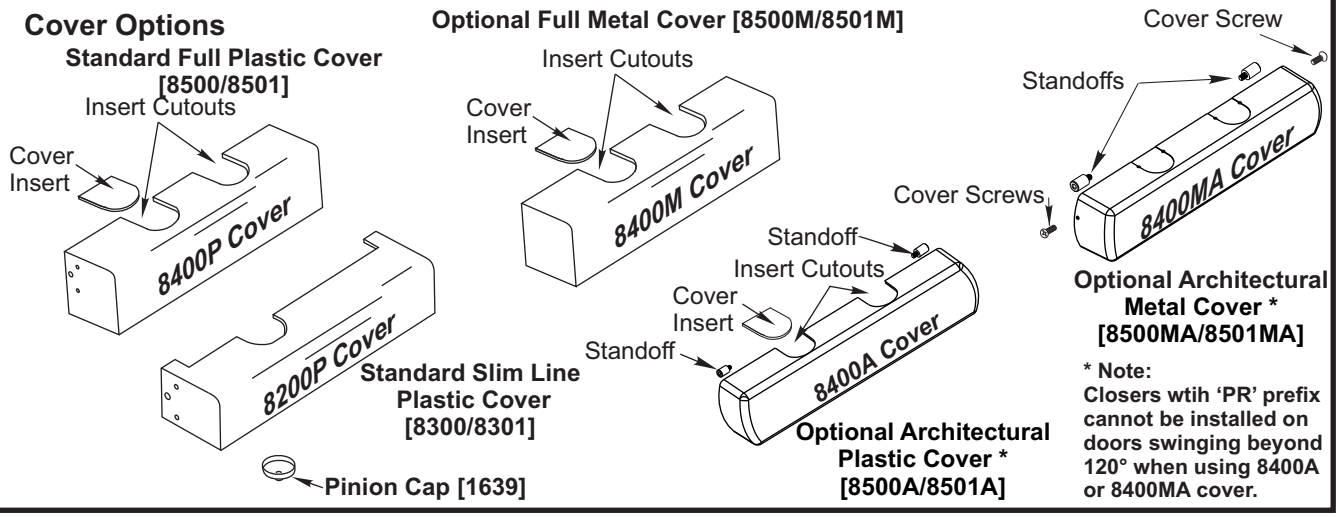
Optional Accessories



Arm Options



Cover Options



*** Note:**
Closers wtih 'PR' prefix cannot be installed on doors swinging beyond 120° when using 8400A or 8400MA cover.

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) (pilot hole required)
	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: Pilot hole required when using self-drilling screws for wood door/frame applications.

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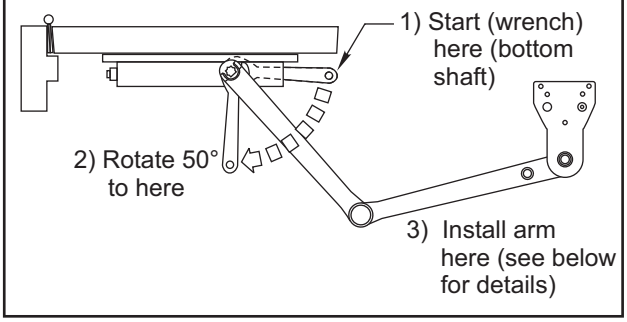
Installation Instructions

- 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 8148 drop plate, only if required, see page 5)* 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 approximate closer power for door size using Power Adjustment Chart below. Use 1/8” hex wrench supplied to adjust Power Adjustment Shaft (set at 8 turns from factory) ... 20 turns maximum. Turn nut **CLOCKWISE** to **Increase, COUNTER-CLOCKWISE** to **Decrease** power. See Page 6 for the illustration of this step.
- *Mount 8148 Dropplate ... only if required (see Page 5).*
- Install closer with **power adjustment shaft toward hinge edge of door.** Note: If using full metal cover, cover mounting clips must be slipped under ends of closer when closer is being mounted. Clips should project 1/4” (6mm) beyond each end of closer.
- For suffix “H” only, check that hand of arm matches hand of door. See arm illustration on page 2 for location of arm handing mark.
- With door closed, closer valves **‘S’** and **‘L’.** Then with a wrench, turn pinion shaft 50° or more to permit proper alignment of **arm mark** with **pinion flat** -
  ‘L’ for **Left** hand door.
  ‘R’ for **Right** hand door.
  See **Arm Mounting Detail** and **Main Arm Installation** at right below. **(Caution: Closer arm is under spring tension and may be difficult to rotate.)**
- Reopen valves **‘S’** and **‘L’** 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 2019S or 6891, if required.* **(Caution: Closer arm is under spring tension and may be difficult to rotate.)**
- Make closer adjustments (see page 6) before installing cover ... NOTE: DO NOT back valves out of closer or a leak will result.
- Install cover (see page 6).
  NOTE: Architectural Covers 8400A and 8400MA **CAN NOT** be used with “PR” prefix closers that are installed for doors openings in excess of 120°.

Installation Dimensions Chart

		Dim		85°-90°	90°-95°	95°-100°	100°-105°	105°-110°	110°-115°	115°-120°	120°-180°
PR8101/ * PR8301/ PR8501		A	in. (mm)	3-3/4 (95)							1-1/4 (32)
		B	in. (mm)	9-1/2 (241)							7 (178)
CLP8100/ CLP8300/ CLP8500	Butt Hinges or Offset Pivots	A	in. (mm)	5-1/2 (140)	4-3/4 (121)	4 (102)	3-3/8 (86)	2-3/4 (70)	2-1/8 (54)		
		B	in. (mm)	11 (279)	10-1/4 (260)	9-1/2 (241)	8-7/8 (225)	8-1/4 (210)	7-5/8 (194)		
	Center Pivots	A	in. (mm)	5-3/8 (137)	4-5/8 (117)	3-7/8 (98)	3-1/4 (83)	2-5/8 (67)	2 (51)		
		B	in. (mm)	10-7/8 (276)	10-1/8 (257)	9-3/8 (238)	8-3/4 (222)	8-1/8 (206)	7-1/2 (191)		

Arm Mounting Detail

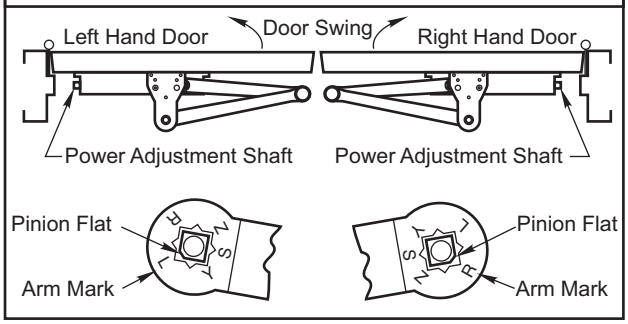


Power Adjustment Chart

		Full Clockwise Turns of Closer Power Adjustment Shaft			
	Door Size	28-32 in 0.7-0.8 m	33-36 in 0.85-0.9 m	37-42 in 0.95-1.05 m	43-48 in 1.1-1.2 m
PR8101/PR8301/PR8501	Interior	7	10	13	16
	Exterior	9	12	15	18
CLP8301/CLP8501	Interior	9	11	13	15
	Exterior	10	12	14	16

NOTE: Maximum of 20 turns (360°) of Power Adjustment Shaft. Closer is shipped set at mid power setting.

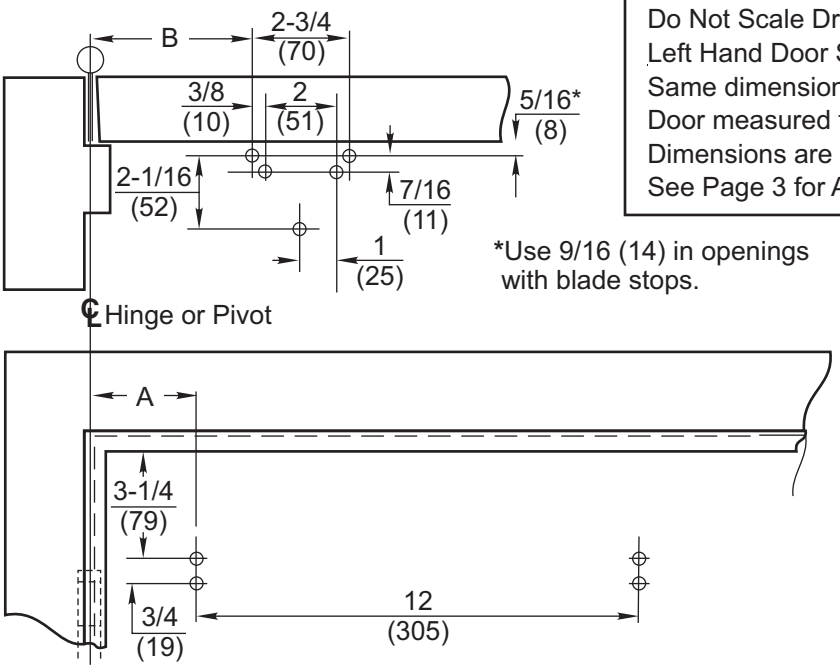
Main Arm Installation Instructions



* Series PR8500A, PR8500MA, and **CAN NOT** be installed for 120° to 180° door openings.

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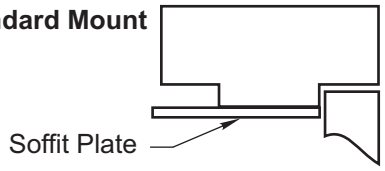
Standard Frame



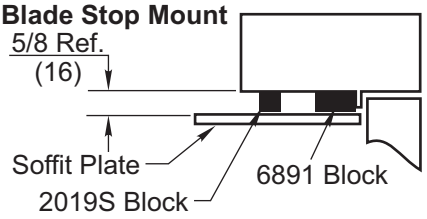
*Use 9/16 (14) in openings with blade stops.

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.

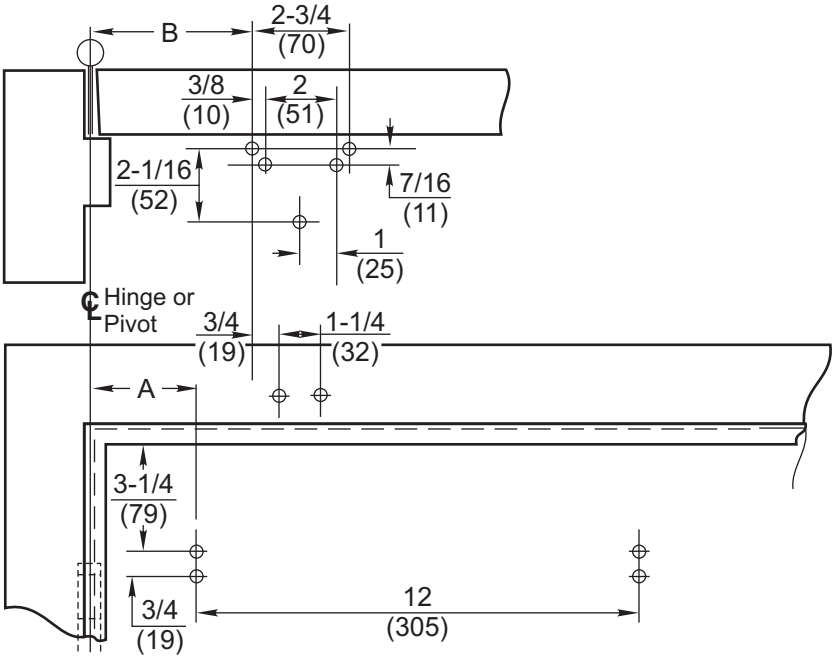
Standard Mount

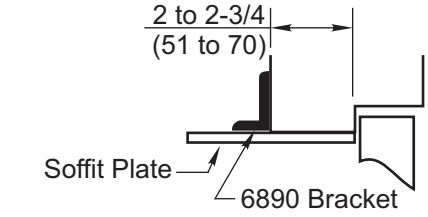


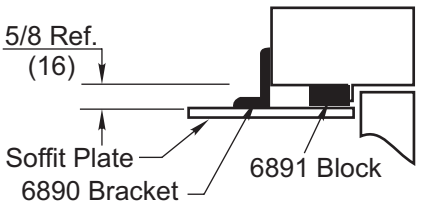
Blade Stop Mount



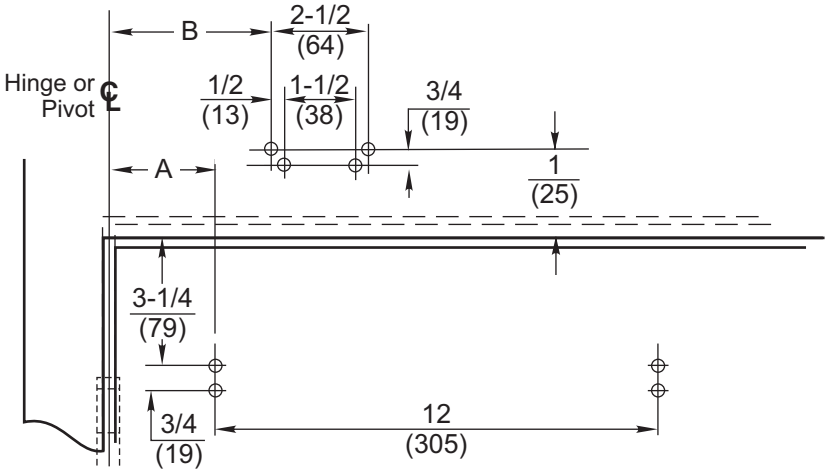
Narrow Frame

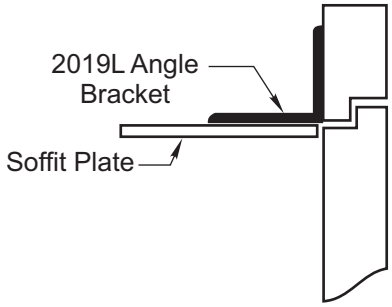






Flush Partition

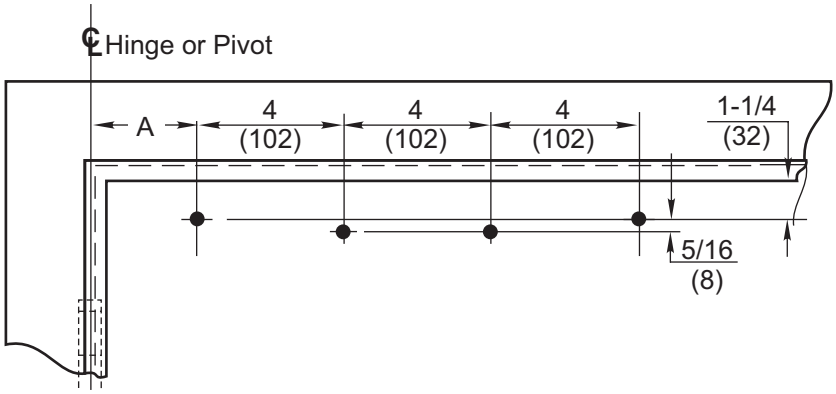


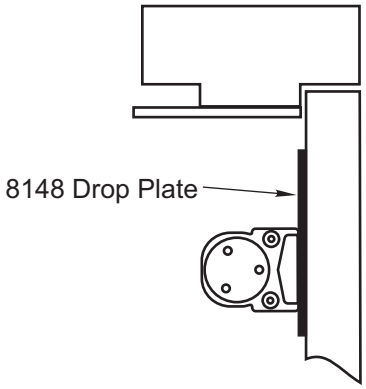


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8148 Drop Plate Mounting Holes

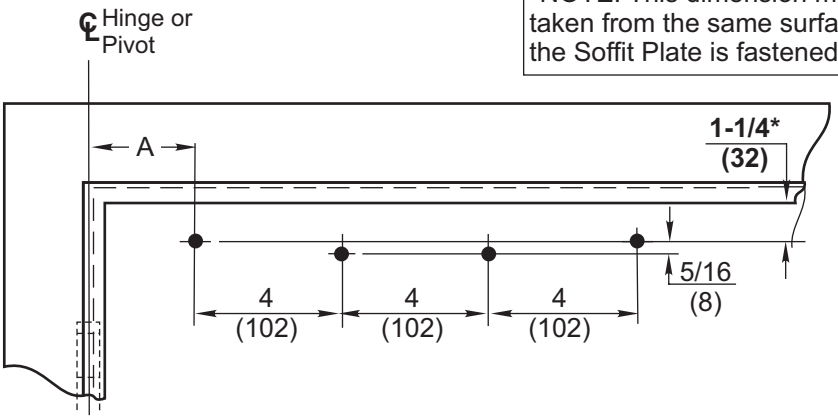
Standard Frame

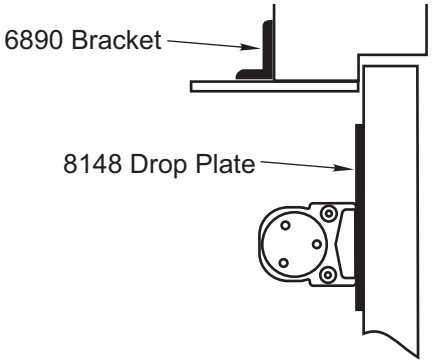




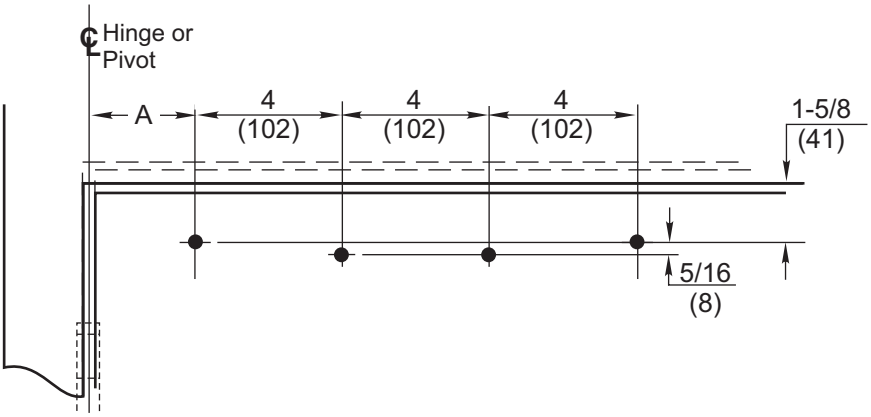
Narrow Frame

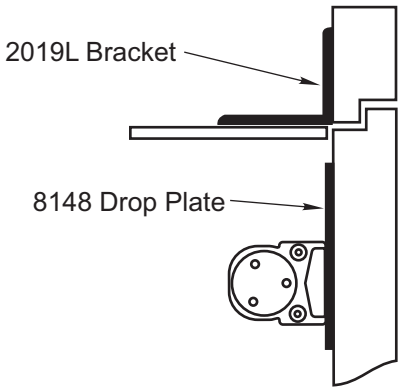
*NOTE: This dimension must be taken from the same surface that the Soffit Plate is fastened to.





Flush Partition

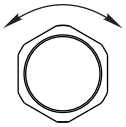




Thumbturn Hold-Open Feature ("CLP" prefixed units only)

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.

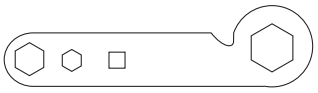
DECREASE - - INCREASE



Thumbturn Action
(Units suffixed "T")

Friction Hold-Open Feature ("PR" prefixed units only)

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



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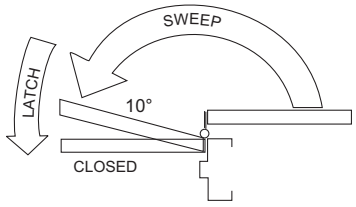
Unit Adjustment

Closing Power Adjustment (8X01 closers only –
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.
- Valve "D" Controls Delay Range (optional).
-

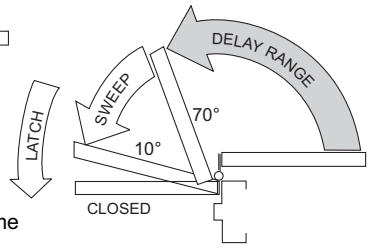
Closing Speed Controls **Figure 1.**



Standard Closing Cycle 1A

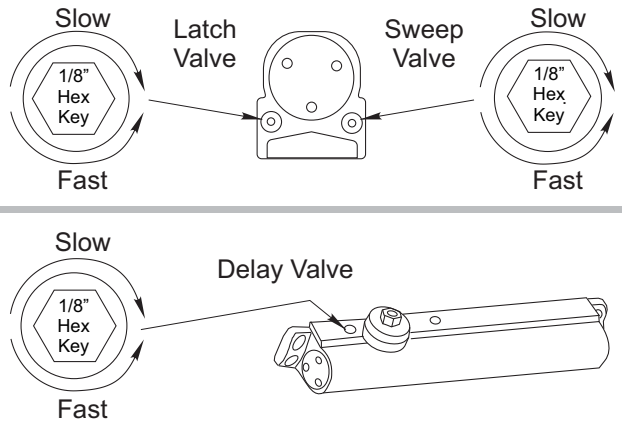
Attention : Adjust Closing Speed Time to between 4 to 7 seconds from 90°. Use of the door by handicapped, elderly or small children may require greater closing time.

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

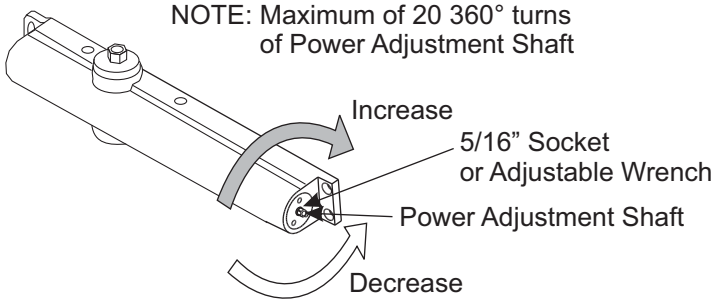


Delayed Action Closing Cycle 1B

Closing Speed Controls **Figure 2.**



Closing Power Control **Figure 3.**



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).

Cover–Full cover: Slide cover insert into the un-used cutout in cover. Install cover using screws provided.

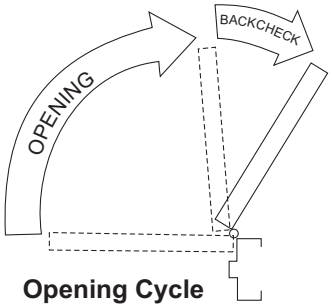
Narrow cover: Install cover using screws provided. Install pinion cap onto pinion shaft by hand or with a Phillips screw driver - DO NOT OVER TIGHTEN.

Metal cover: Fasten cover to mounting clips with screws provided.

Architectural Metal Cover: Remove cover insert where pinion is located. Install standoffs in ends of closer. Install cover using screws provided.

Architectural Plastic Cover: Slide cover insert into the un-used cutout in cover. Install standoffs in ends of closer. Snap cover over standoffs.

Opening Door Control **Figure 4.**

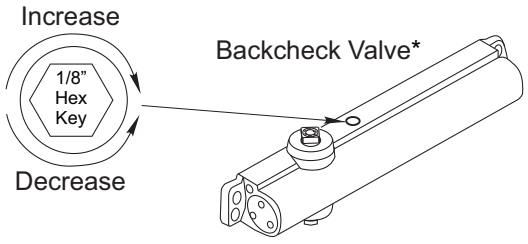


Opening Cycle

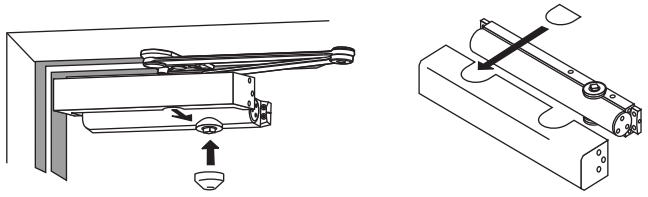
CAUTION: DO NOT BACK VALVE OUT OF CLOSER OR A LEAK WILL RESULT.

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

Backcheck Control **Figure 5.**



Cover Mounting **Figure 6.**



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