2800PT Cam Action Combination Door Closer Holder & Releasing Device

Push & Pull Side, Door Mounted, Non-Hold Open & Hold Open Installation Instructions

NORTON RIXSON

ASSA ABLOY

⚠ WARNING

This product can expose you to lead which is known to the state of California to cause cancer and birth defects or other reproductive harm. For more information go to: www.P65warnings.ca.gov.

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.

Hold open units are not permitted to be installed in fire door assemblies.

READ AND FOLLOW ALL INSTRUCTIONS.
SAVE THESE INSTRUCTIONS.

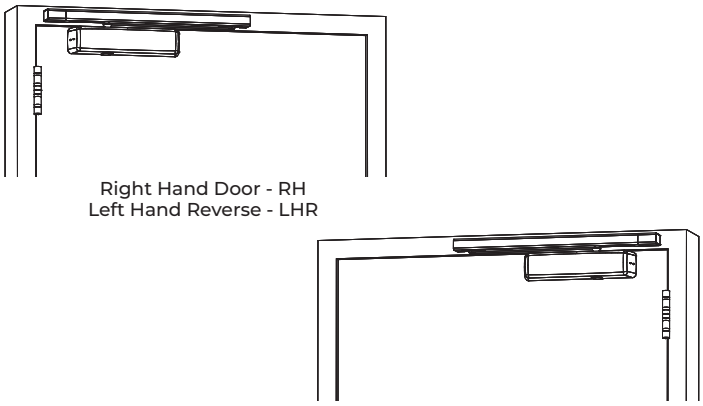
The closing force for Series 2800PT door closers is adjustable from a size 1 to a size 6, as outlined in ANSI Standard A156.4. When these series of door closers are installed and adjusted to conform to ADA reduced opening force requirements (5 lbs max.) for interior doors, they may not have adequate closing force to reliably close and latch the door. Power adjustments charted on Page 2 are recommended where possible, to ensure proper door control.

NOTES:

- 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.
- Use of an auxiliary door stop is always recommended.
- Unit must be mounted on interior of building in dry environment, maximum humidity of 95%.
- See NFPA 70 for wiring requirements and NFPA 72 for alarm system requirements.

Standard Applications

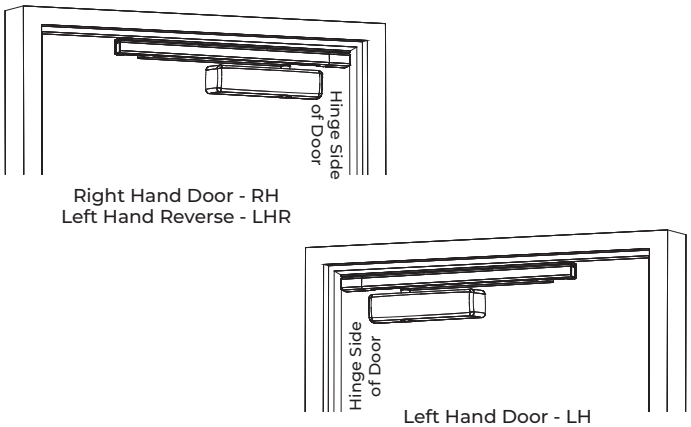
Pull Side Door Mount



Right Hand Door - RH
Left Hand Reverse - LHR

Left Hand Door - LH
Right Hand Reverse - RHR

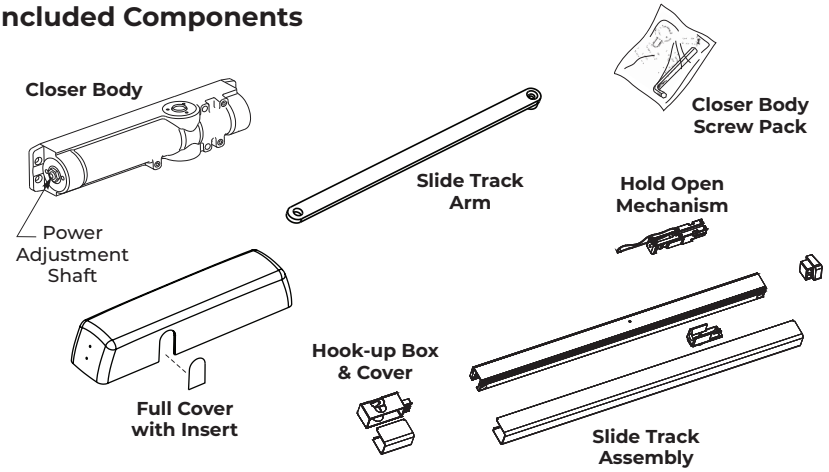
Push Side Door Mount
28PTPB Angle Bracket required (included)



Right Hand Door - RH
Left Hand Reverse - LHR

Left Hand Door - LH
Right Hand Reverse - RHR

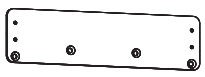
Included Components



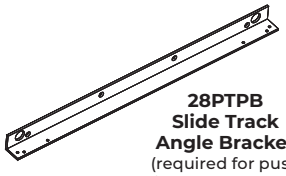
Spline Shaft Screw Pack

Track Mounting Screw Pack

Optional Components



2888 Back Plate
(required for pull side frame mounted applications)



28PTPB Slide Track Angle Bracket
(required for push side door mounted applications)

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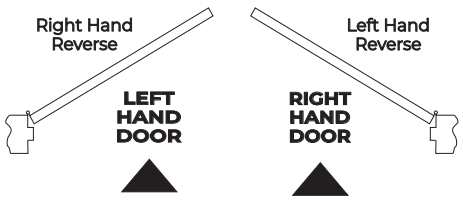
Experience a safer and more open world

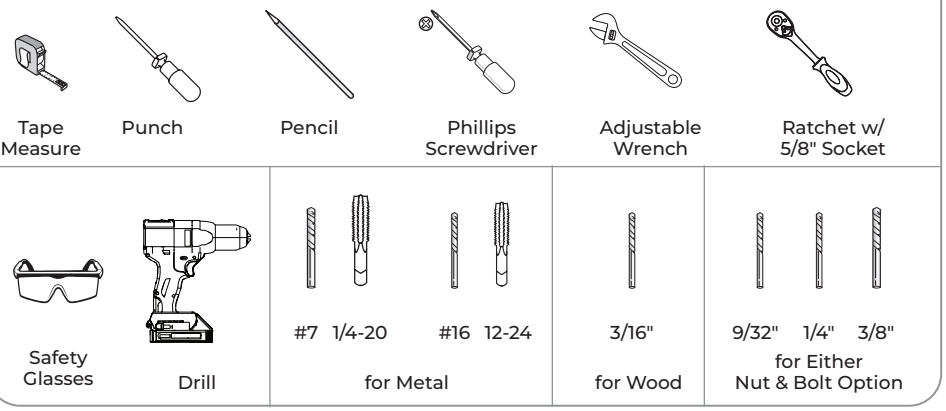
Supplied Hardware

Fasteners			Door or Frame	Drill Sizes
Standard	Closer	1/4" Self-Drilling Screw	Aluminum Metal or Wood	3/16" (4.8mm) pilot hole required
	Track & Hook-Up	#12-14 Self-Drilling Screw		3/32“ (2.4mm) pilot hole required
	Closer	1/4-20 Mach. Screw	Metal	Drill #7 (.201 dia. or 5.10mm); Tap 1/4-20
	Track & Hook-Up	#12-24 Mach. Screw		Drill #16 (.017 or 4.4mm); Tap #12-24
Optional	Closer	**Sleeve Nut (SN) for use with 1/4-20 Mach. Screw	Hollow Metal	9/32" (7.0mm) thru 3/8" (9.5mm) door face opposite to closer
			Aluminum or Wood	3/8" (9.5mm) thru
	Closer	Thru Bolt and Grommet Nut (TBGN)	All	9/32" (7.0mm) thru 3/8" (9.5mm) dia. x 3/8" (9.5mm) deep, door face opposite to closer

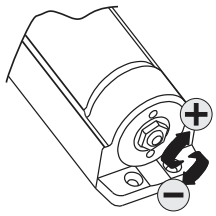
To Determine Hand of Door:



Tools Needed:



Power Adjustment Chart



Use 5/8” Socket or Adjustable Wrench for this Adjustment

PULL SIDE 2800PT Power Adjustment Chart for Hold Open and Non-Hold Open			PUSH SIDE 2800PT Power Adjustment Chart for Hold Open and Non-Hold Open		
Number of turns from 0	Size	Approximate Closing Force Measured 30" from Hinge	Number of turns from 0	Size	Approximate Closing Force Measured 30" from Hinge
1-1/2	1	2 lbf.	2	1	2 lbf.
2	2	3 lbf.	3	2	3 lbf.
4	3	5 lbf.	5	3	5 lbf.
6	4	8 lbf.	6-1/2	4	8 lbf.
8	5	11 lbf.	9	5	11 lbf.
9	6	14 lbf.	10	6	14 lbf.

NOTE: Maximum of 14 turns (360°) of Power Adjustment Shaft. Closer is shipped set at 4 turns.

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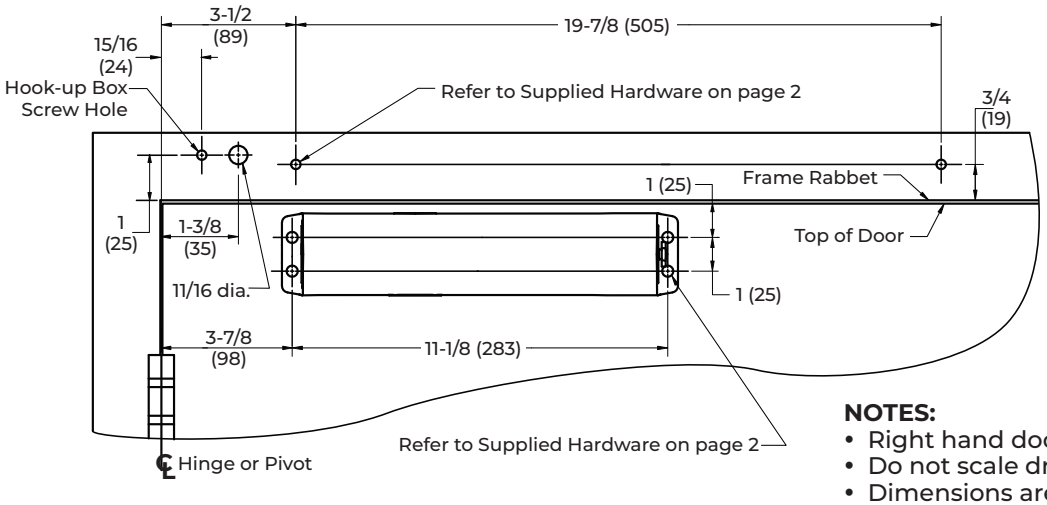
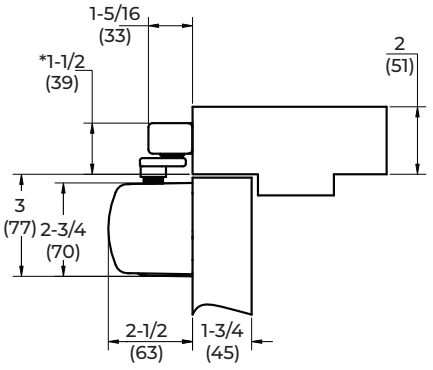
Pull Side Door Mount Installation





NOTES:

- Right hand door shown
- Do not scale drawing
- Dimensions are given in inches (mm)
- Minimum ceiling clearance for unit is 1-1/2" (39mm) from top of frame rabbet
- Maximum door opening: 70° to 120° Hold Open track

Installation Sequence

1. Using the template above, locate the holes on the door and frame.
   - Four (4) on door for closer
   - Three (3) on frame face for track assembly.
2. Prepare door and frame for fasteners using the Supplied Hardware chart on page 2.
3. Close the “C” and “L” valves on the closer body. (Figure 1)

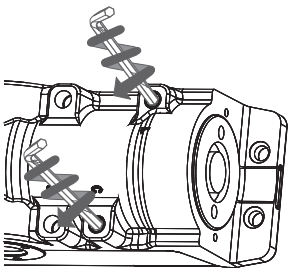


Figure 1

4. Using the appropriate hardware per the Supplied Hardware chart on page 2, fasten the closer body to the door with the power adjustment nut toward the lock edge of door. (Figure 2)

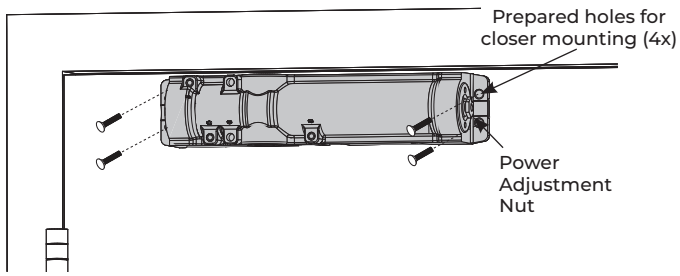


Figure 2

5. Install the hook-up box as shown. (Figure 3) **Do not fully tighten hardware.**
6. Wire 24VDC to the assembly. **Do not apply power at this time.**

   For concealed wiring: Use the hook-up box as a guide to mark and pre-drill a hole with the 3/16" drill. Use the Ø11/16" hole saw or equivalent to drill the conduit hole and secure the conduit to hook-up box. (Figure 3)

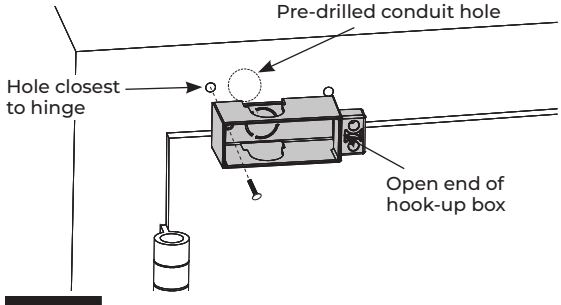
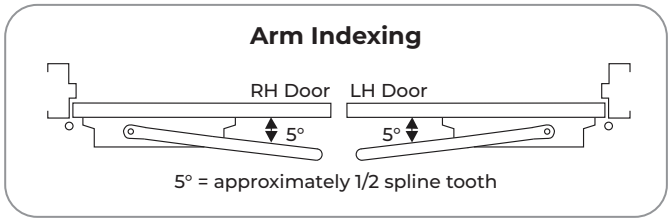


Figure 3

Pull Side Door Mount Installation (cont.)

7. Slide the hold open mechanism, slider, and endcap onto the track. (Figure 4) Properly orient the track so that:
   - wiring from hold open mechanism is toward the hook-up box.
   - the slider is on the other side of the hold open mechanism, further away from the hook-up box.
   - the open side of the track is facing down.
   - the end cap is in the end of the track opposite the hook-up box.
8. Slide the track onto hook-up box and pull the hold open device wiring through the hook-up box opening. Fasten track assembly to frame face. **Tighten all three (3) screws. Slider should move freely.**
9. Using a small flat blade screwdriver, connect the hold open device wire connector to 24VDC power. (Figure 5)
10. Using the provided 4mm allen wrench, secure arm to spline shaft with the M6 flathead screw. (Figure 6)
11. With the arm parallel to the door, insert the spline shaft into the top of closer as shown. (Figure 7) The spline shaft will contact the gear inside the closer.

    NOTE: To avoid hitting the track, open the door to approximately 30° to insert spline shaft into closer body.



12. Once the spline shaft and closer gear have made contact, rotate the arm approximately 5° (as shown in Arm Indexing above) until the spline shaft slides further into the closer gear.
13. Move the arm in position under the slider stud. Insert the 5mm hex wrench through the threaded hole in the arm and into hex on the stud. Rotate counter-clockwise until tightened. (Figure 8)
14. Slide the spline vertically in or out of the closer up to 1/2 inch until arm is parallel to the track. Install plastic bushing on opposite side of spline shaft and secure with the M6 flathead screw using 4mm allen wrench.
15. Slowly open the “C” and “L” valves and allow door to close to the jamb. (Figure 9)
16. Adjust closer power (see Pull Side power setting in the Power Adjustment Chart on page 2), closer valves, and Hold Open device.

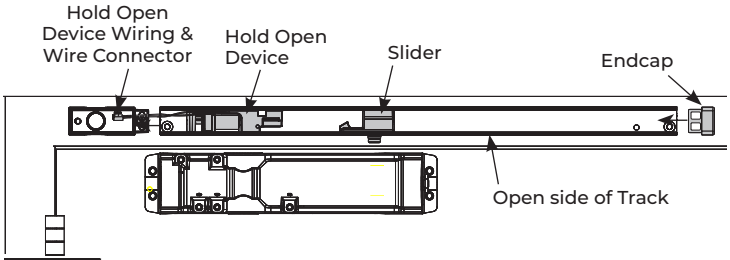


Figure 4

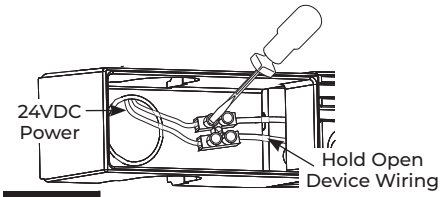


Figure 5

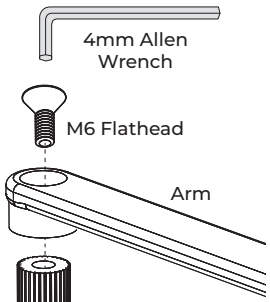


Figure 6

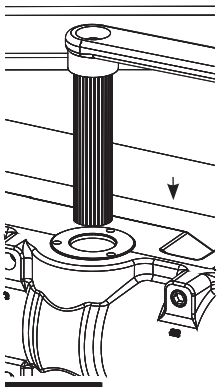


Figure 7

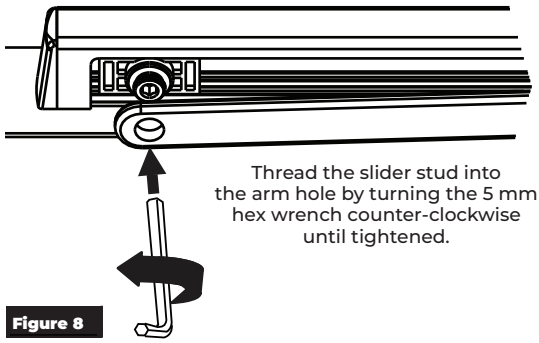


Figure 8

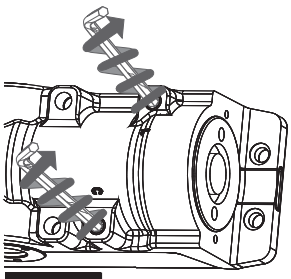


Figure 9

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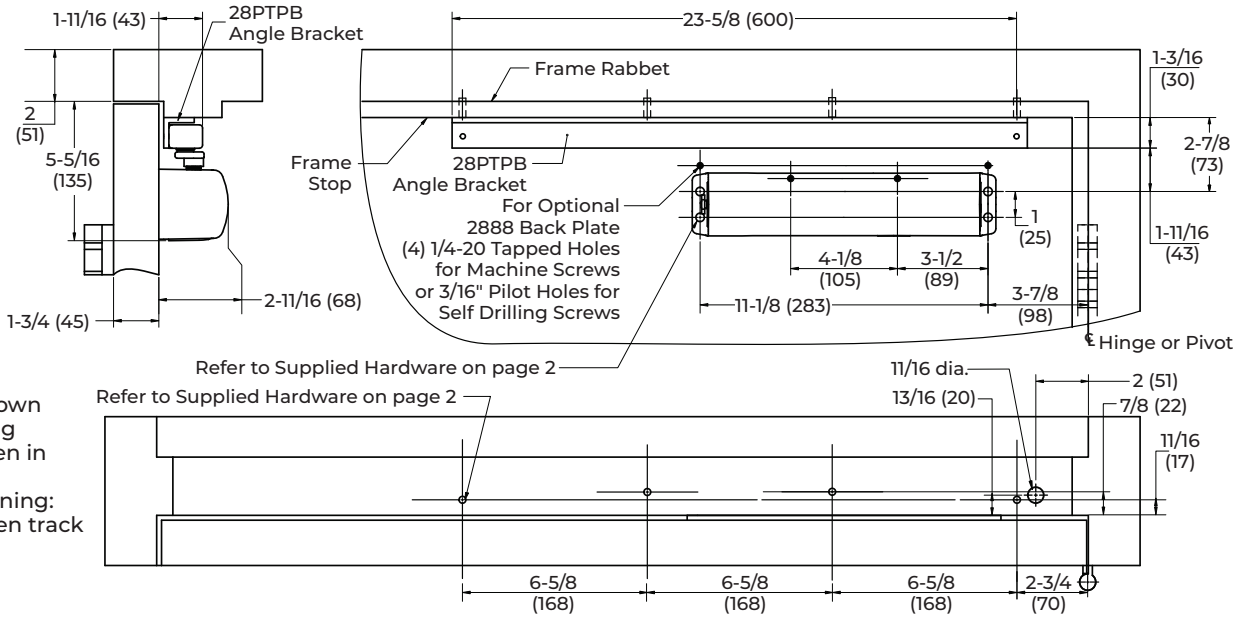
Push Side Door Mount Installation



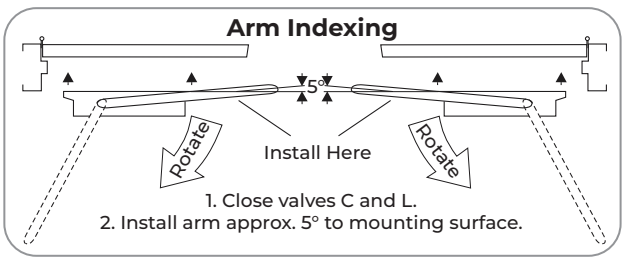
NOTES:
- Right hand door shown
- Do not scale drawing
- Dimensions are given in inches (mm)
- Maximum door opening: 110° Max. – Hold Open track

Installation Sequence

NOTE: The 28PTPB Angle Bracket is required for this configuration.

1. Using the template above, locate the holes on door and frame:
   - Four (4) on door for closer.
   - Four (4) on frame soffit for the 28PTPB angle bracket.
2. Prepare the door and frame for fasteners using the Supplied Hardware chart on page 2.
3. Close “C” and “L” valves on the closer body. (Figure 10)
4. Using the provided 4mm allen wrench, secure arm to spline shaft with the M6 flathead screw. (Figure 11)
5. With the arm parallel to the mounting surface, insert the spline shaft into top of the closer. The spline shaft will contact the gear inside closer. (Figure 12)

   NOTE: To avoid hitting the track, open the door to approximately 30° to insert spline shaft into closer body.
6. Once the spline shaft and closer gear have made contact, rotate arm approximately 5° toward the door (as shown in Arm Indexing graphic) until spline shaft slides further into the closer gear.



7. Fasten the closer body to door with power adjustment nut toward lock edge of door. (Figure 13)

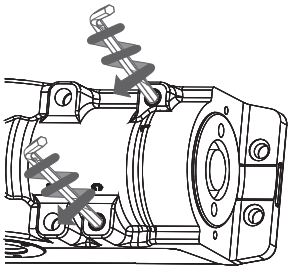


Figure 10

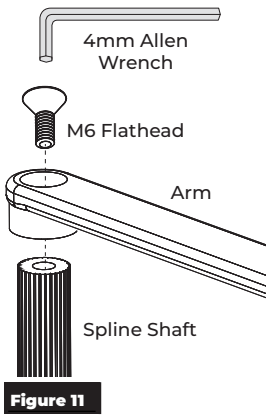


Figure 11

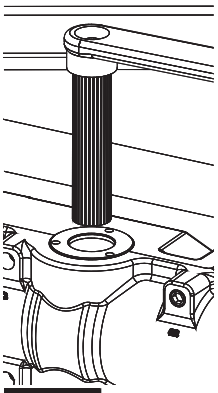


Figure 12

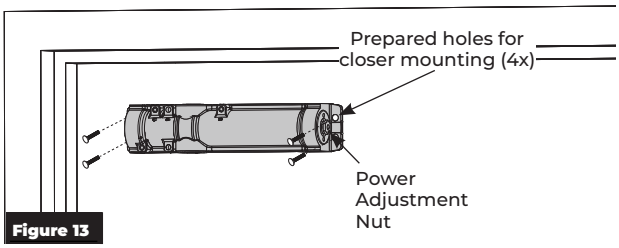


Figure 13

Push Side Door Mount Installation (cont.)

8. Fasten the 28PTPB angle bracket to the frame stop as shown with conduit run thru angle bracket, if required. (Figure 14)

9. Wire 24VDC for the hook-up box. **Do not apply power at this time.**

10. With the opening of the hook-up box facing away from the hinge, fasten hook-up box to 28PTBP angle bracket using provided screw through the hole in angle bracket closest to the hinge. **Do not fully tighten screw at this time.** (Figure 15)
If using conduit: Secure the conduit to hook-up box.

11. Slide the hold open mechanism, slider, and endcap onto the track (Figure 16). Properly orient the track so that:
   - wiring from hold open mechanism is toward the hook-up box.
   - the slider is on the other side of the hold open mechanism, further away from the hook-up box.
   - the open side of the track is facing down.
   - the end cap is in the end of the track opposite the hook-up box.

12. Slide the track onto hook-up box and pull the hold open device wiring through the hook-up box opening. Use the screws provided to fasten track assembly to the angle bracket (Figure 16). **Tighten all three (3) screws. Slider should move freely.**

13. Using a small flat blade screwdriver, connect the hold open device wire connector to 24VDC power. (Figure 17)

14. Move the arm in position under the slider stud. Insert the 5mm hex wrench through the threaded hole in the arm and into hex on the stud. Rotate counter-clockwise until tightened. (Figure 18)

15. Slide the spline vertically in or out of the closer up to 1/2 inch until arm is parallel to the track. Install plastic bushing on opposite side of spline shaft and secure with the M6 flathead screw using 4mm allen wrench.

16. Slowly open the “C” and “L” valves and allow door to close to the jamb. (Figure 19)

17. Adjust closer power (see Push Side power setting in the Power Adjustment Chart on page 2), closer valves, and Hold Open device. (See page 7)

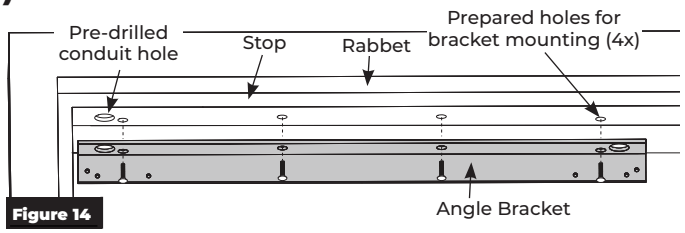


Figure 14

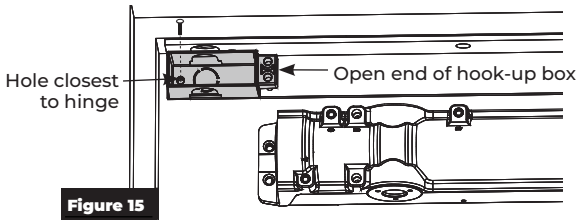


Figure 15

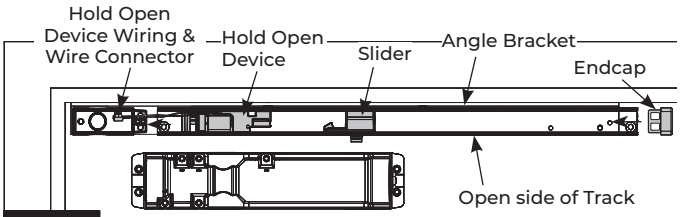


Figure 16

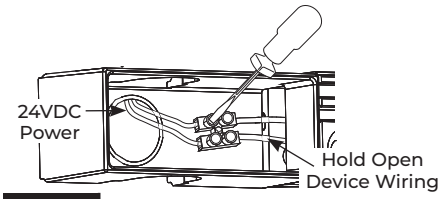


Figure 17

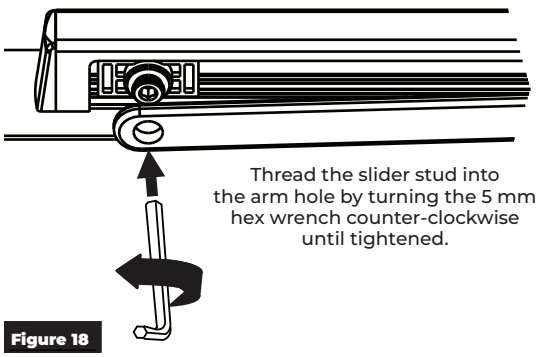


Figure 18

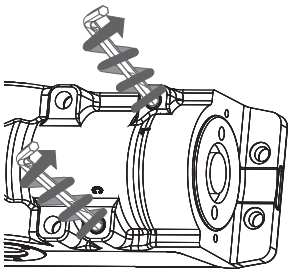


Figure 19

Adjustments

Arm Attachment to Track Slider:

Move the arm into position under the slider stud. Insert the 5mm hex wrench through threaded hole in the arm and into hex on stud. Rotate counter-clockwise until tightened. See Figure 1.

Closing Power

2800PT Models are fully adjustable.

For proper sizing see chart on Page 2.
To adjust closer power – See Figure 2.

Increase or decrease power as necessary.

Closing Cycle (hydraulic control) See Figure 3A.

– Valve "L" controls door speed in Latch range.
– Valve "C" controls door speed in Sweep range.

Use the 4mm hex-key provided & adjust as shown in Figure 4.

Opening Cycle (hydraulic control) See Figure 3B.

Valve “B” cushions (slows) door opening in the back-check range.

NOTE: Never close this valve completely or damage to the closer may occur.

Use the 4mm hex-key provided & adjust as shown in Figure 5.

Hold Open Position/Power Adjustment:

If more or less hold open power is required, the power may be increased by turning the adjustment screws in the hold open device.

Refer to Hold Open Adjustments on page 8 for additional information.

Installation of Closer Cover:

Architectural plastic cover: Slide the cover over the closer and snap on.

Figure 1 - Arm Attachment to Track Slider

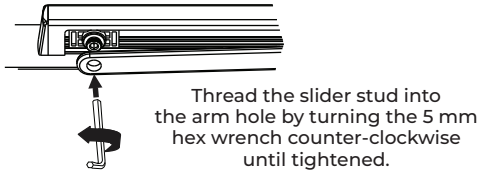


Figure 2 - Closing Power Control

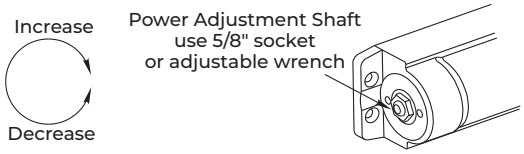


Figure 3 - Hydraulic Control

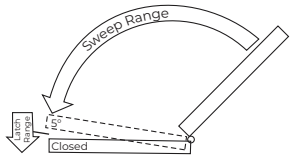


Figure 3A: Closing Cycle

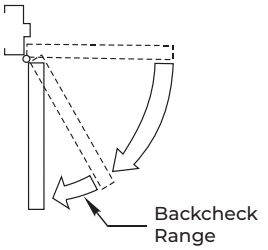


Figure 3B: Opening Cycle

Figure 4 - Closing Speed

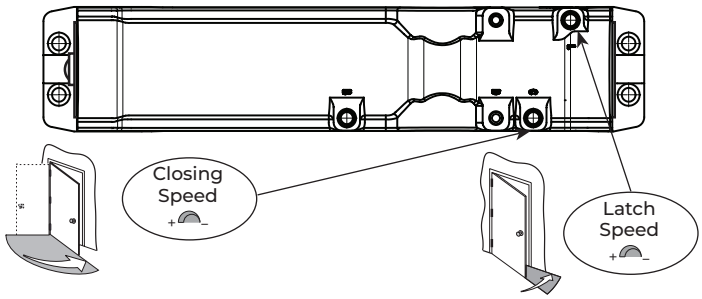
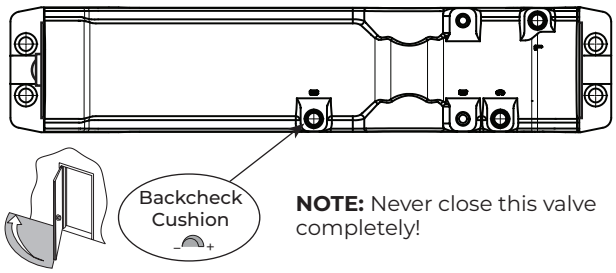


Figure 5 - Backcheck



NOTE: Never close this valve completely!

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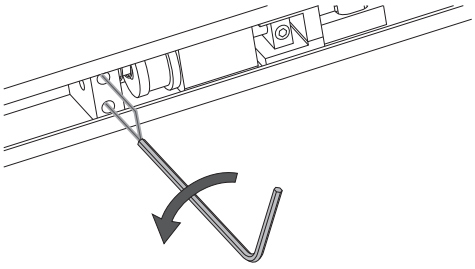
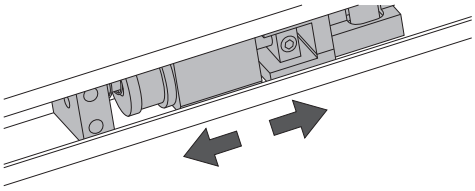
Hold Open Adjustments

Electric Hold Open Position Adjustment

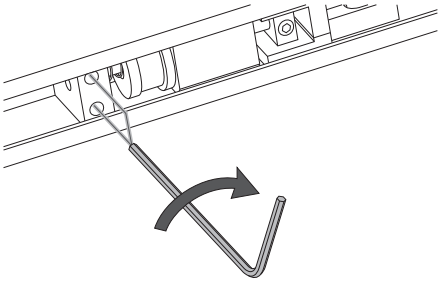
1. With 24VDC turned on, open door to desired hold open position.
2. Use 2mm Allen wrench to loosen the two (2) set screws to secure hold open mechanism in place.



3. Slide hold open mechanism over so it engages the slider.

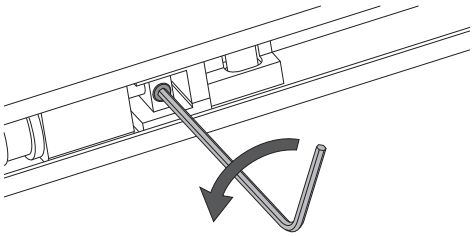


4. Use 2mm Allen wrench to tighten two (2) set screws to secure hold open mechanism in place.

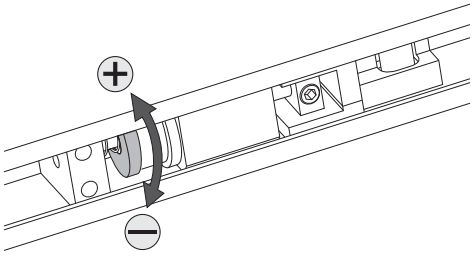


Electric Hold Open Power Adjustment

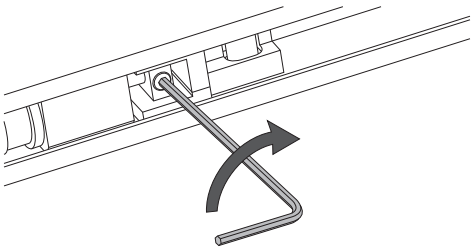
1. Loosen single set screw in solenoid assembly.



2. Turn knob on end of solenoid shaft CW or CWW to adjust hold open power.

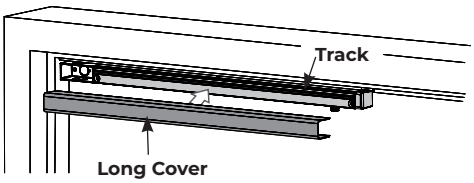


3. Once power is set, re-tighten set screw.

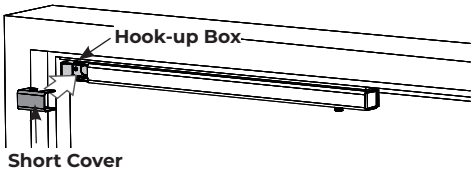


Track & Hold Open Cover

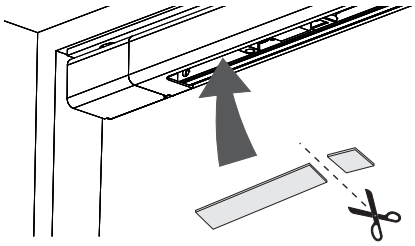
1. Snap long cover over track.



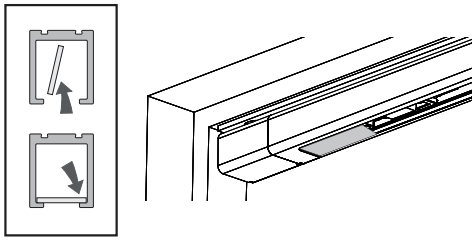
2. Snap short cover over hook-up box.



3. Use scissors to cut the frosted acrylic strip large enough to cover the gap between solenoid and the hook-up box.



4. Insert the acrylic piece into the track as shown. Once inserted, slide it into position to cover the wiring between the solenoid and hook-up box.



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