Norton®

Installation Instructions

80-9380-2212-020 (06-09)

8040 & 8050 Slide Track Door Closers

Non Hold Open & Hold Open Models

Note: Hold open models are not permitted to be installed in Listed fire door assemblies.

PULL SIDE MOUNTED		PUSH SIDE MOUNTED	
Non Hold Open	**Hold Open**	**Non Hold Open**	**Hold Open**
8340ST, 8341ST, 8540ST, 8541ST	**8350ST, 8351ST, 8550ST, 8551ST**	**P8340ST, P8341ST, P8540ST, P8541ST**	**P8350ST, P8351ST, P8550ST, P8551ST**

- With or without "DL" suffix, delayed action closing feature.
- With or without "M" suffix, Metal Cover.

The closing force for these series of 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 rerequirements (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 5 are recommended, where possible, to insure proper door control.

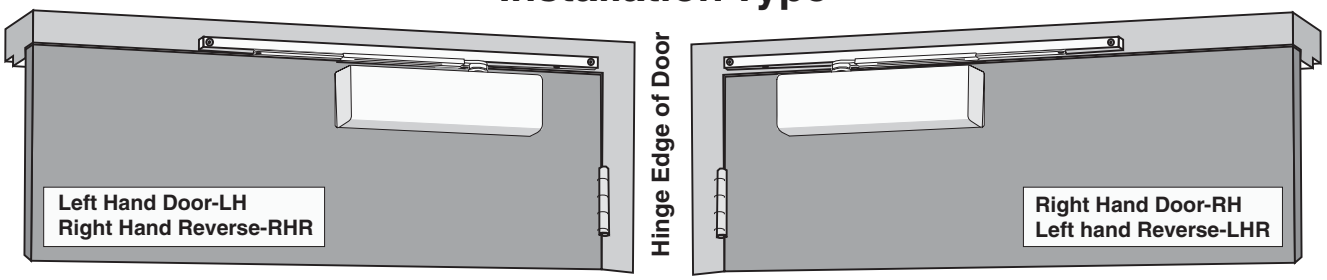
- **Sized Door Closers 8340/8540 & 8350/8550** have 50% power increase capability. Closer size 4 has the weakest power, closer size 6 has the strongest power.
- **Multi-Sized Closer 8341/8541 & 8351/8551** can be adjusted from size 1 thru 6.

CAUTION

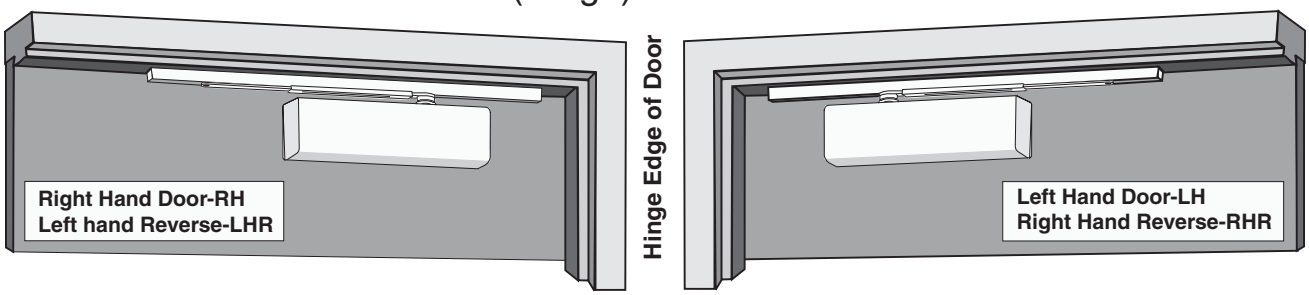
An incorrectly installed or improperly adjusted door closer can cause property damage or personal injury. These instructions should be followed to avoid the possibility of misapplication or misadjustment.

For Use on Doors with 4½" or 5" (115-127mm) Wide Butt Hinges

Installation Type



Pull (Hinge) Side Mounted



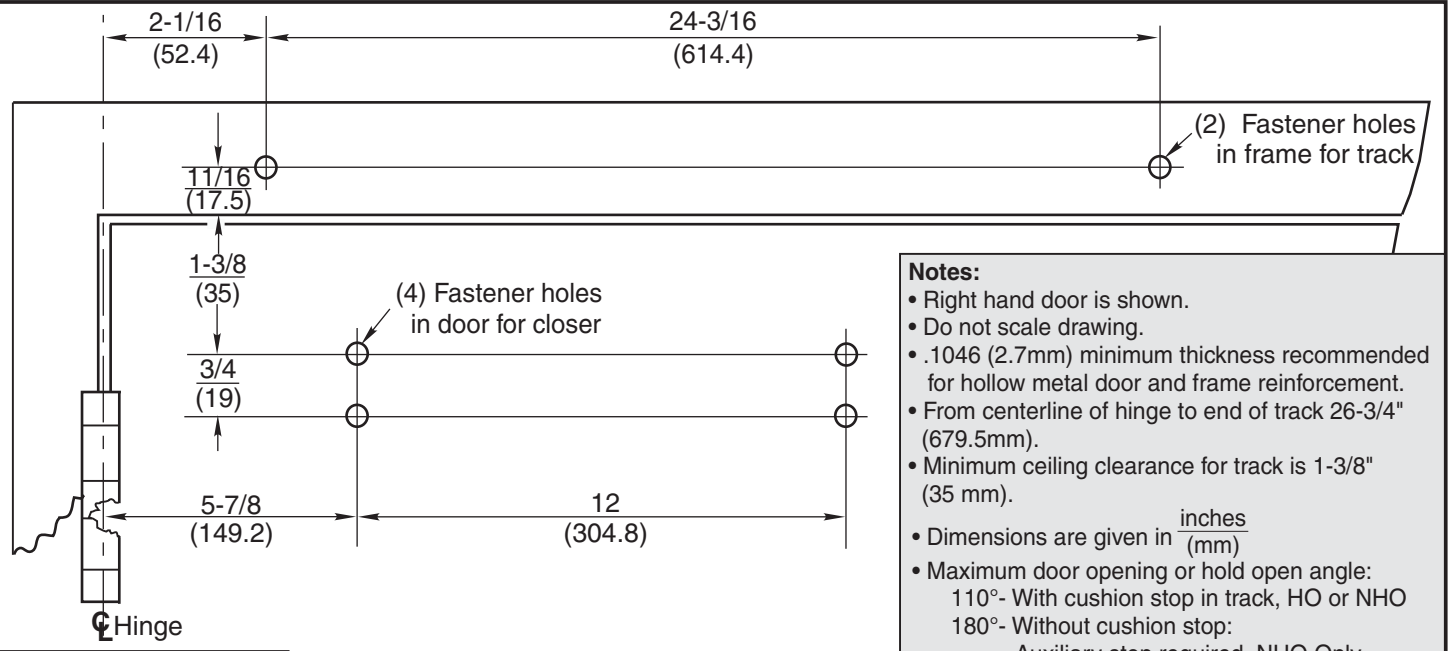
Push (Stop) Side Mounted

8050 Series Hold Open Units Are Not Permitted To Be Installed In Fire Door Assemblies

- Maximum pull side frame reveal is 1/8" (3mm).
- Minimum frame face for pull side is 1-3/8" (35 mm).
- All components are non handed.
- The use of ball bearing hinges is recommended for the door on which the closer will be installed. Door must swing freely.
- Where severe or abusive conditions are expected a separate door stop, supplied by others, is recommended to assist in preventing damage to the door closer, closer arm; or to the door, frame or adjacent walls.
- Door and frame must be properly reinforced, or the use of special fasteners employed, to prevent door collapse or the mounting screws from pulling out.
- All dimensions are given in inches with corresponding metric dimensions (millimeters) in parentheses.

Template

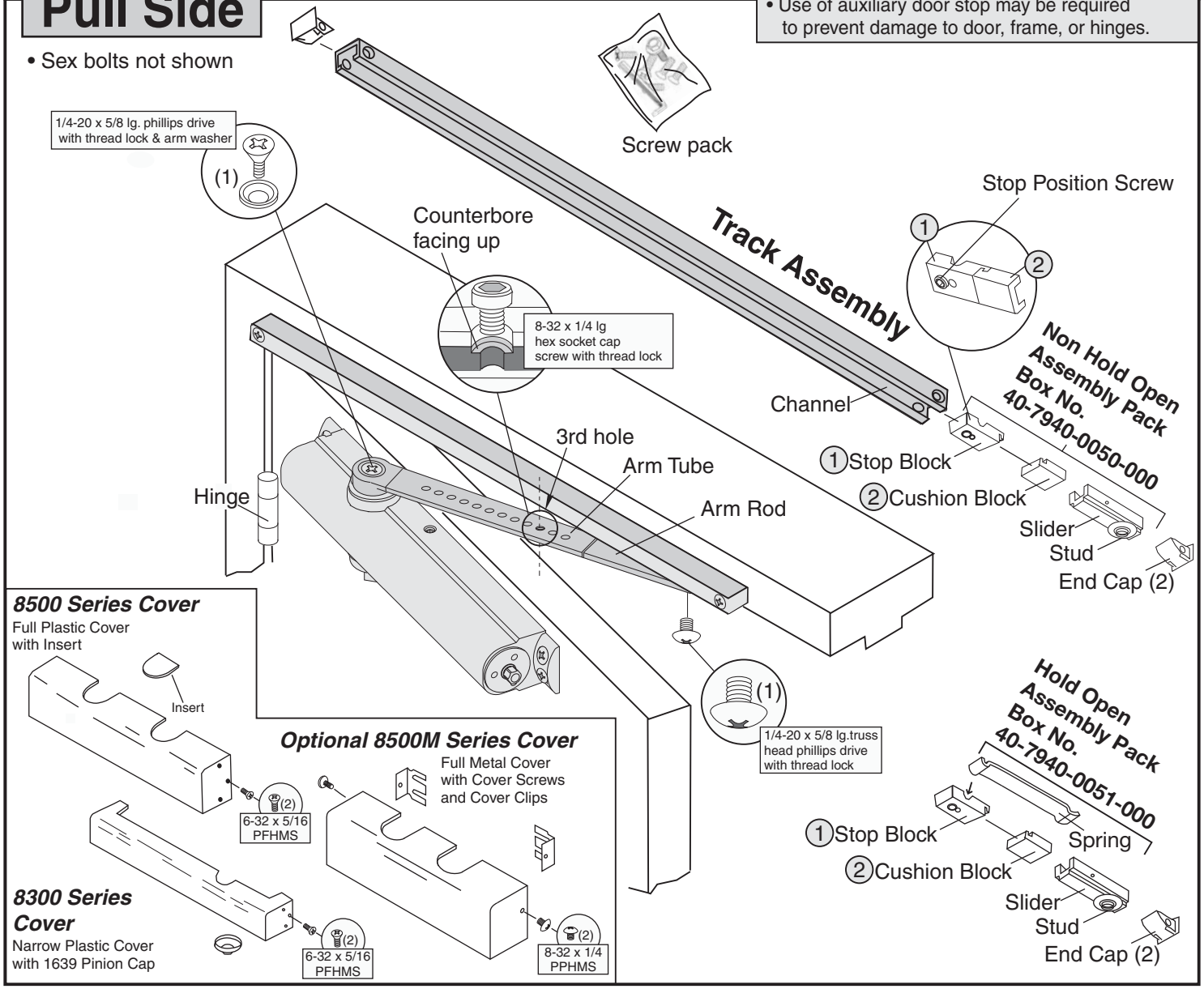
Pull Side Installation



Notes:
- Right hand door is shown.
- Do not scale drawing.
- .1046 (2.7mm) minimum thickness recommended for hollow metal door and frame reinforcement.
- From centerline of hinge to end of track 26-3/4" (679.5mm).
- Minimum ceiling clearance for track is 1-3/8" (35 mm).
- Dimensions are given in $\frac{\text{inches}}{(\text{mm})}$
- Maximum door opening or hold open angle:
  110°- With cushion stop in track, HO or NHO
  180°- Without cushion stop:
  Auxiliary stop required, NHO Only
- Use of auxiliary door stop may be required to prevent damage to door, frame, or hinges.

Pull Side

- Sex bolts not shown



Installation Sequence
Pull or Push Side Mount

- **Determine hand of door and type of installation** from illustrations on Page 1.

- **Use template dimensions** on Page 2 or Page 4 to locate fastener holes on door and frame. See "Preparation for Fasteners" chart.
  Frame: Prepare the frame for mounting track. Drill and tap holes for 1/4-20 machine screws or #14 wood screws.
  Door: Prepare the door for mounting closer. Drill and tap (4) holes for 1/4-20 machine screws, #14 wood screws, 3/8 diameter sex-nuts, or through bolts and grommet-nuts.
  Note: If drop plate is used (see Page 4), prepare holes for 8148/8548/8158 drop plate instead of closer. Secure drop plate before mounting closer.

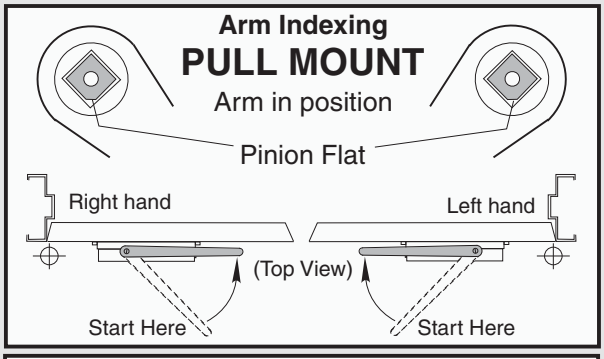
- **Fasten closer to door or drop plate.** Position closer with:
  Pull side- power adjustment shaft **away** from hinge
  Push side- power adjustment shaft **toward** hinge
  Secure mounting screws.
  Note: If using full metal cover, mounting clips must be slipped under ends of closer when closer is being mounted. Clips should project 1/4" (6 mm) from each end of closer.

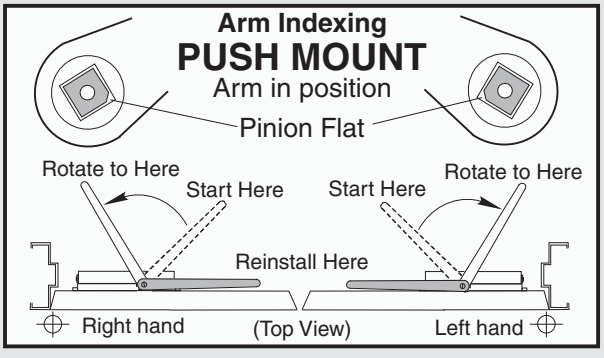
- **Assemble Slide Arm.** Insert flat arm rod into arm tube with the counterbore screw hole facing up. Align counterbore with the 3rd hole in the arm tube and secure with 8-32 x 1/4 long hex socket cap screw. See illustration on Page 2 or 4.

- **Install arm on closer pinion**-see arm indexing illustrations below.

Pull mount:
Position slide arm with counterbore facing up and align with pinion flat as illustrated. Install onto pinion.

Push mount:
With "S" & "L" valves closed, place arm on closer pinion shaft with arm at a 45° angle to frame face. Rotate arm toward hinge at least 50°. Remove arm and reinstall on pinion with arm almost parallel to frame face, before pinion shaft can rotate far enough to create interference with door.





- **Secure arm** with washer and flat head phillips drive arm screw with thread lock.

Preparation for Fasteners		
Fasteners	**Door or Frame**	**Drill Sizes**
#14 type "A" S.M. screw Closer: 1-1/4" (32mm) Track: 2-3/4" (70mm)	Wood	7/32" (5.56mm)
1/4" -20 machine screw	Metal	drill: #7 (.201") tap: 1/4" -20
Sex-nuts and bolts	Hollow Metal	9/32" (7.00mm) through 3/8" (9.50mm) door-face opposite to closer
	Aluminum or Wood	3/8" (9.50mm) through
Through-bolts and grommet-nuts (Optional)	All	9/32" (7.00mm) through; 3/8" (9.50mm) dia. x 3/8" (10mm) deep door-face opposite to closer

- **Track Assembly**
  Remove slider assembly parts from box
  # 40-7940-0050-000 for Non Hold Open or
  # 40-7940-0051-000 for Hold Open
  and insert into channel in the order shown. See illustration on Page 2 or 4.
  Use of the hold open assembly pack on a non hold open device will void the UL® listing for this product.
  Insert end caps into ends of track prior to installing.

- **Install track to frame.** Place the assembled slide track against frame with the open side down, stop and cushion blocks toward the hinge. Move the slider to the opposite end of the slide track. Secure slide track with 1/4-20 flat head phillips drive mounting screws.

- **Connect arm to track.**
  Pull side: With door closed.
  Push side: With door open slightly.
  Rotate arm to slider and place end over stud. Push up on arm and tap gently to seat (to prevent stud from turning during assembly). Secure with 1/4-20 x 5/8" long truss (rounded) head phillips drive screw with thread lock. CAUTION: Closer arm is under spring tension and may be difficult to rotate.

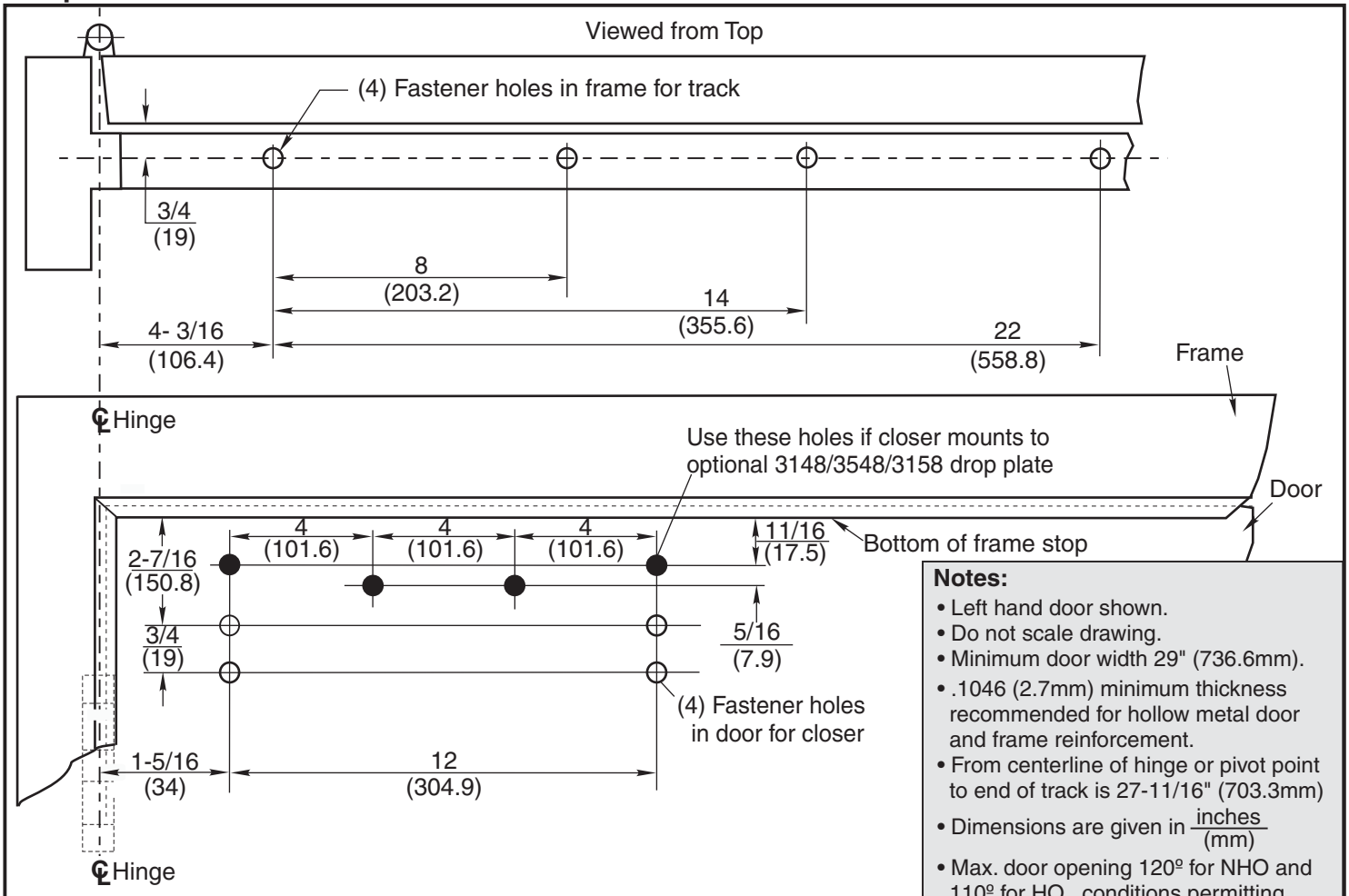
- **Set door stop angle.** Open door to the angle you want the door to stop. With the door held at that location, slide stop with cushion block against slider. Tighten the stop position screw (large set screw) with 3/16" hex wrench (from screw pack) until secure. Release door.

- **Adjust closer** (see Page 5) before installing cover.

- **Install Cover.**
  Full Cover: Slide insert into unused cover slot (see illustration on Page 2 or 4). Install cover using screws provided.
  Narrow Cover: Install cover using screws provided. Thread pinion cap into pinion shaft. Do not overtighten.
  Full Metal Cover: Fasten cover to mounting clips with screws provided.

Template

Push Side Installation

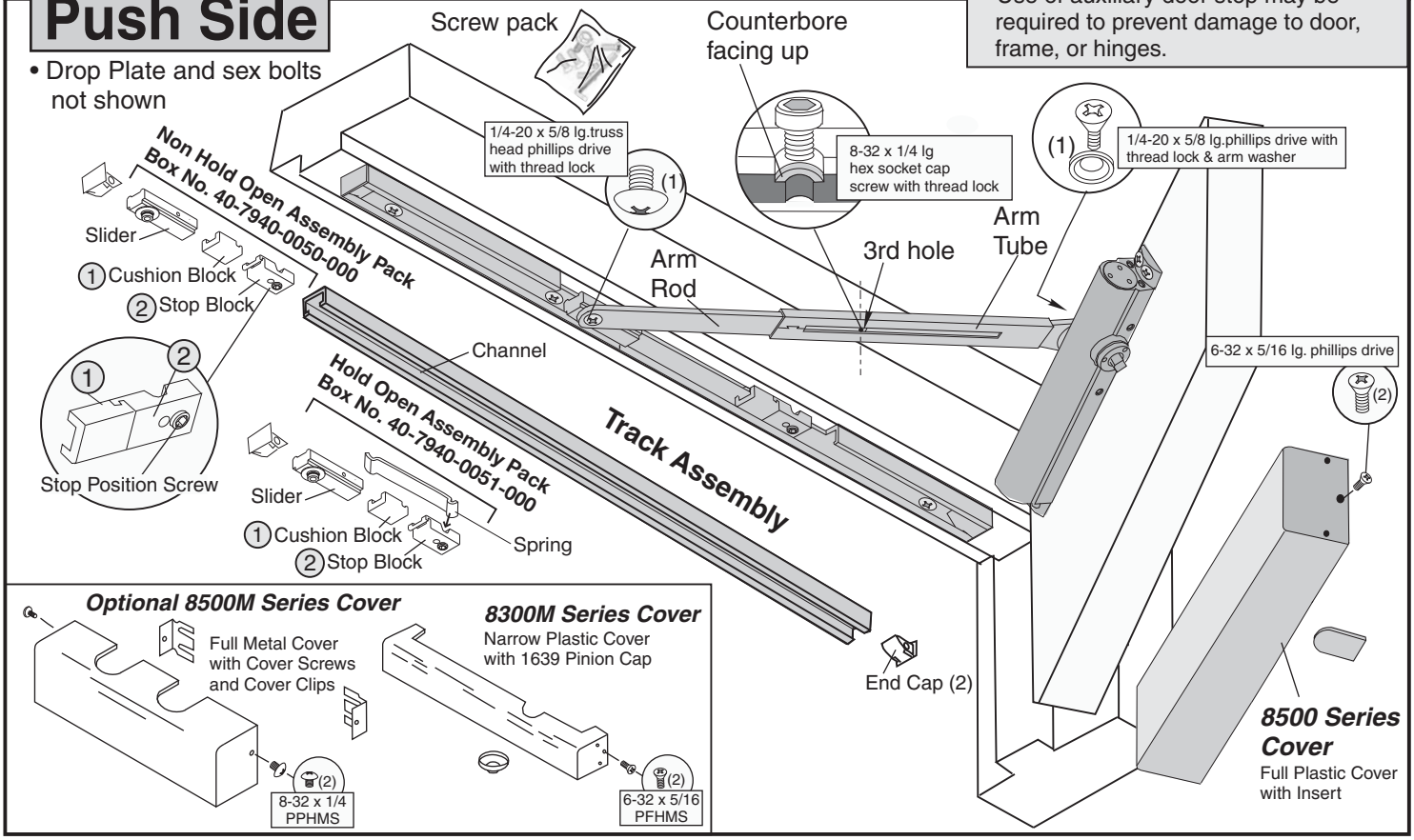


Notes:

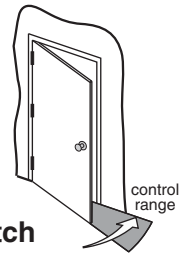
- Left hand door shown.
- Do not scale drawing.
- Minimum door width 29" (736.6mm).
- .1046 (2.7mm) minimum thickness recommended for hollow metal door and frame reinforcement.
- From centerline of hinge or pivot point to end of track is 27-11/16" (703.3mm)
- Dimensions are given in $\frac{\text{inches}}{(\text{mm})}$
- Max. door opening 120º for NHO and 110º for HO., conditions permitting.
- Use of auxiliary door stop may be required to prevent damage to door, frame, or hinges.

Push Side

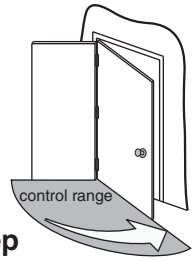
- Drop Plate and sex bolts not shown



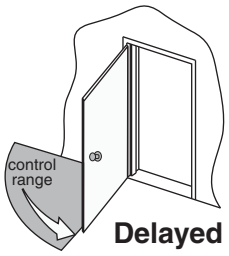
Closing Controls



Latch

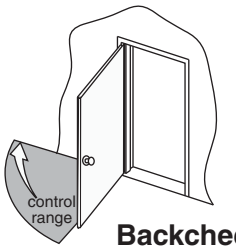


Sweep



Delayed Action

Opening Controls



Backcheck

Closer Adjustments

Closing Power

8340/8540 & 8350/8550 Models come in three different sizes (4 through 6); each power size can be increased by 50%. Adjust as required. **See Figure 1.**

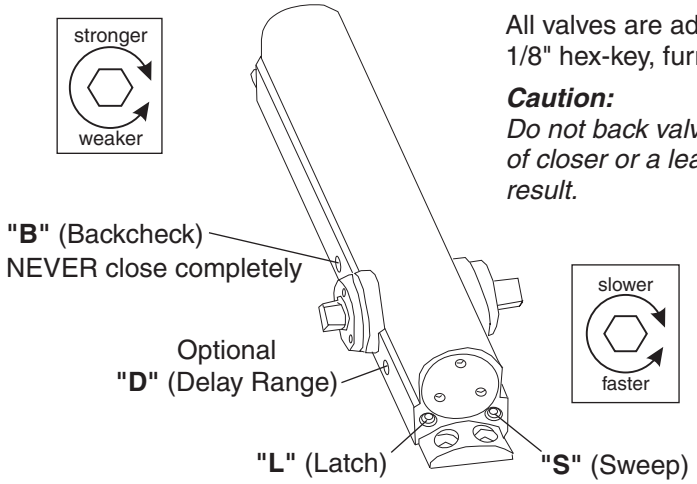
8341/8541 & 8351/8551 Models are adjustable sizes 1 thru 6.
For proper sizing see power adjustment chart below right.
To adjust closer power, **see Figure 1**.
Increase or decrease power as necessary.

Closing Cycle (see illustrations above).
Valve **"L"** controls door speed in **Latch Range.**
Valve **"S"** controls door speed in **Sweep Range.**
Valve **"D"** (Optional) controls door speed in **Delay Range.**
Use 1/8" hex-key furnished and adjust as shown in **Figure 2.**

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

Opening Cycle **(see illustration above).**
Valve **"B" cushions (slows) door opening in the Backcheck Range.**
NOTE: Never close this valve completely or damage to closer may occur.

Closing Speed Controls — Figure 2



All valves are adjusted with 1/8" hex-key, furnished.

Caution:
Do not back valves out of closer or a leak will result.

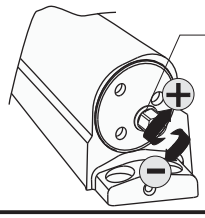
Power Adjustment Chart		
Door Size Inches (meters)	Full Clockwise Turns of Closer Power Adjustment Shaft	
	Interior Door	Exterior Door
28-32 (0.07-0.80)	(10)	13
33-36 (0.85-0.90)	12	15
37-42 (0.95-11.05)	14	17
43-48 (1.10-1.20)	17	19

Note:
Power adjustments charted are recommended where possible to insure proper door control. See Note on Page 1 where codes may dictate reducing these recommended adjustments.

NOTE: Maximum of 20 turns (360°) of Power Adjustment Shaft.

- Set closing power, as charted. Closer is shipped at power setting as circled. See Figure 1 at left for illustration of how to make these adjustments.

Closing Power Control — Figure 1



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