

### 7570ST, 7770ST, 7560ST & 7760ST (Pull Side Mounted)

### PS7570ST, PS7770ST, PS7560ST & PS7760ST (Push Side Mounted)

### Security Door Closer or Door Closer with Security Arm Only Slide Track Installations

- For Closers with or without "DA" suffix, delayed action closing feature.

### Non Hold Open Models

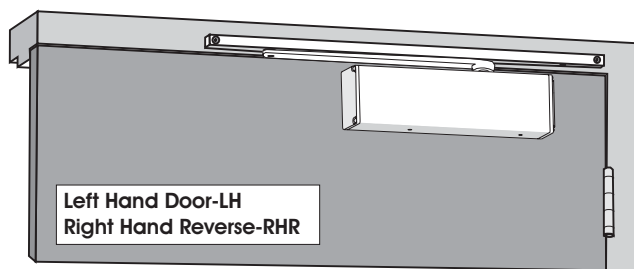
Series		Product Type
Size Closer	Multi-Sized Closer	
7770ST PS7770ST	7570ST 7570BF-ST PS7570ST PS7570BF-ST	• Security Door Closer • Door Closer with a Security Cover, Security Arm & Security Track
7760ST PS7760ST	7560ST 7560BF-ST PS7560ST PS7560BF-ST	• Door Closer with Security Arm Only

#### CAUTION

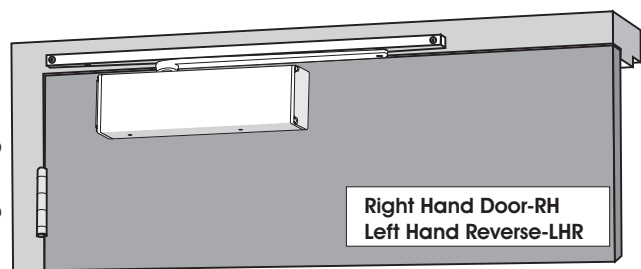
An incorrectly installed or improperly adjusted door closer can cause property damage or personal injury. These instructions should be followed to avoid the possibility of misapplication or misadjustment.

- **Sized Door Closers 7760/7770** have 50% power increase capability. Closer size 2 has the weakest power, closer size 6 has the strongest power.
- **Multi-Sized Closer 7560/7570** can be adjusted from size 2 thru 6.
- **BF (Barrier Free) Closer 7560BF/7570BF** can be adjusted from size 1 thru 4. This series is intended for use where doors are required to meet accessibility standards.

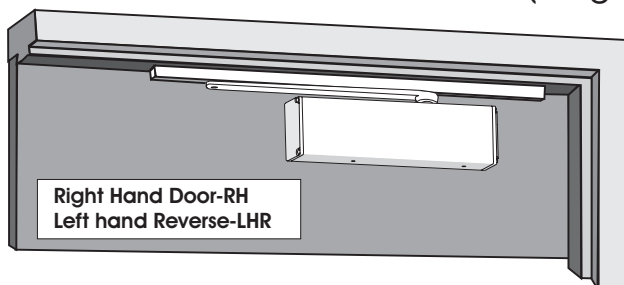
### Installation Type



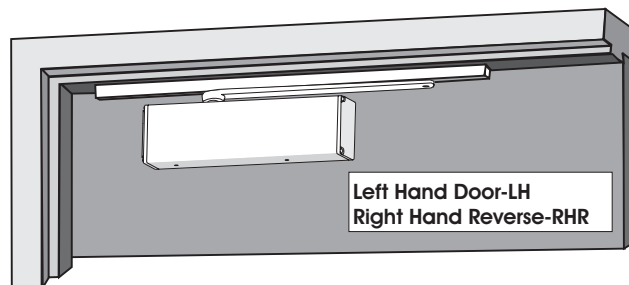
Hinge Edge of Door



Pull (Hinge) Side Mounted



Hinge Edge of Door

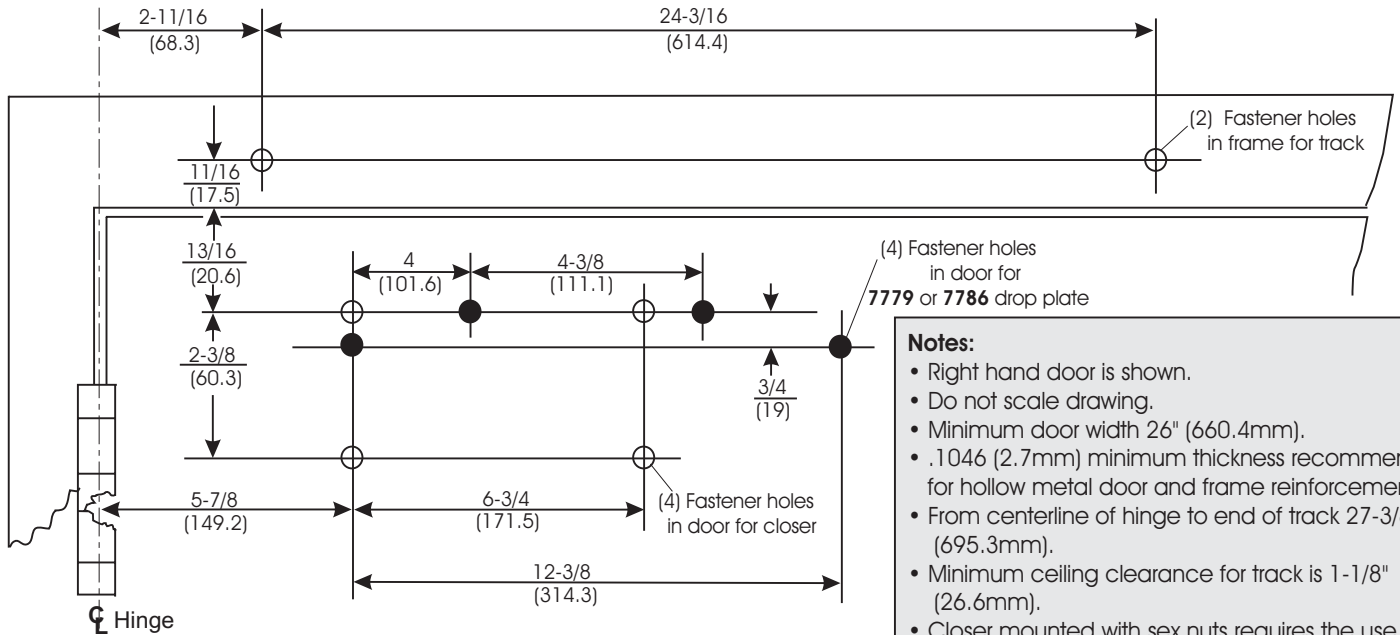


Push (Stop) Side Mounted

- Maximum pull side frame reveal is 1/8" (4mm).
- Minimum frame face for pull side is 1-1/8" (26.6mm).
- Security Door Closers 7770/7570 only. Door closer cover is handed and cannot be reversed. All other 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.
- 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 parenthesis.
- Torx tamper resistant drive screws are normally supplied with this product.

# Template

# Pull Side Installation



- Notes:**
- Right hand door is shown.
  - Do not scale drawing.
  - Minimum door width 26" (660.4mm).
  - .1046 (2.7mm) minimum thickness recommended for hollow metal door and frame reinforcement.
  - From centerline of hinge to end of track 27-3/8" (695.3mm).
  - Minimum ceiling clearance for track is 1-1/8" (26.6mm).
  - Closer mounted with sex nuts requires the use of door silencers.
  - Dimensions are given in  $\frac{\text{inches}}{\text{(mm)}}$
  - Maximum door opening:
    - 110°- recommended with cushion stop in track.
    - 180°- without cushion stop.
  - Use of auxiliary door stop may be required to prevent damage to door, frame, and hinge.

## Pull Side

- Drop Plate and sex bolts not shown

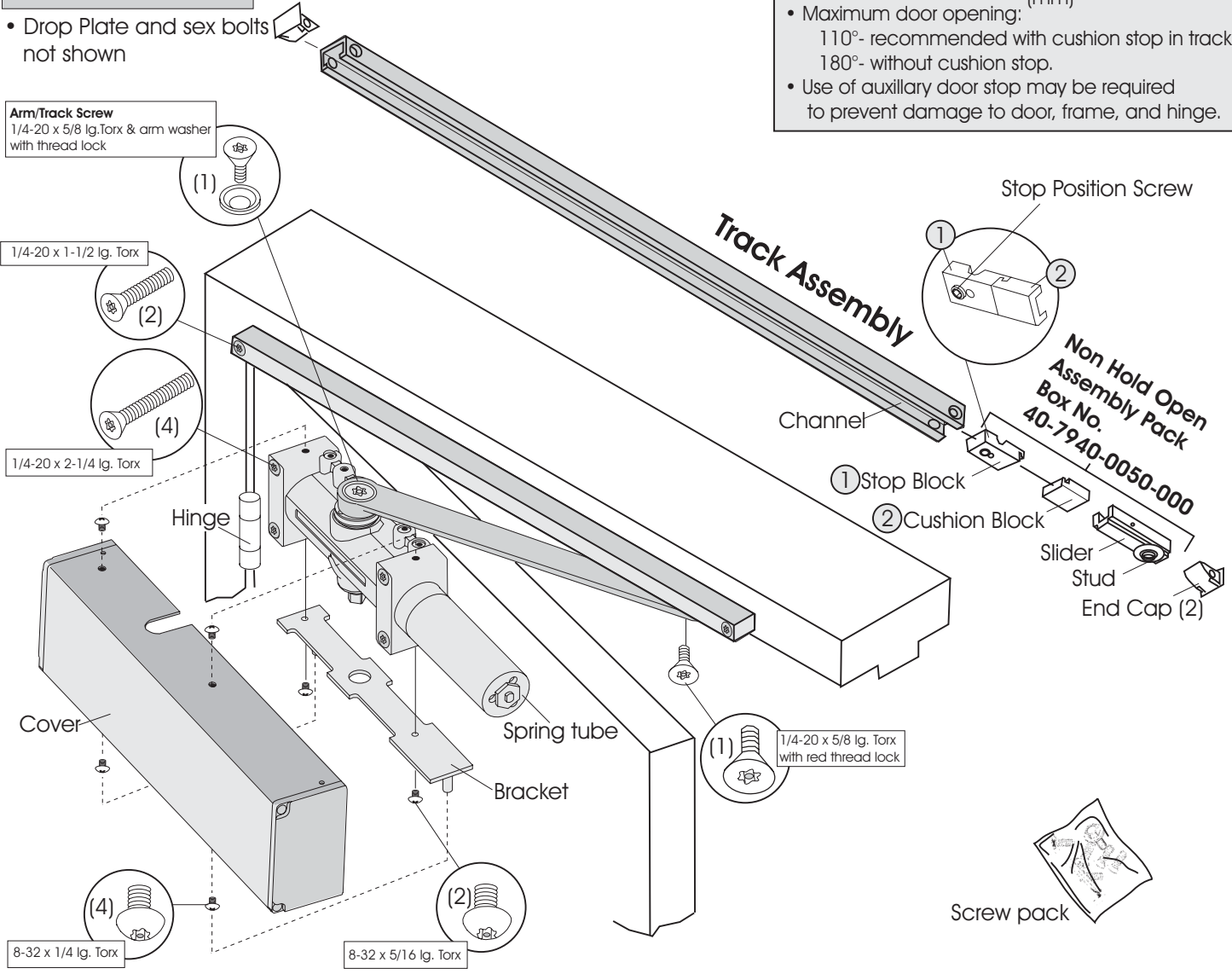
**Arm/Track Screw**  
1/4-20 x 5/8 lg. Torx & arm washer with thread lock

1/4-20 x 1-1/2 lg. Torx

1/4-20 x 2-1/4 lg. Torx

8-32 x 1/4 lg. Torx

8-32 x 5/16 lg. Torx



**Non Hold Open Assembly Pack**  
Box No. 40-7940-0050-000

Screw pack

# Installation Sequence

## Pull or Push Side Mount

- **Determine hand of door and type of installation** from illustrations on page 1. Closer covers are handed. Hand of cover must match hand of door.

- **Use template dimensions** to locate fastener holes on door and frame. See "Preparation for Fasteners" chart below.

**Frame:** Prepare the frame for mounting track. Drill and tap holes for 1/4-20 machine screws.

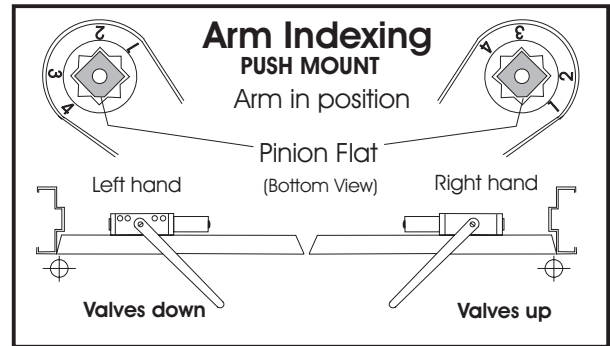
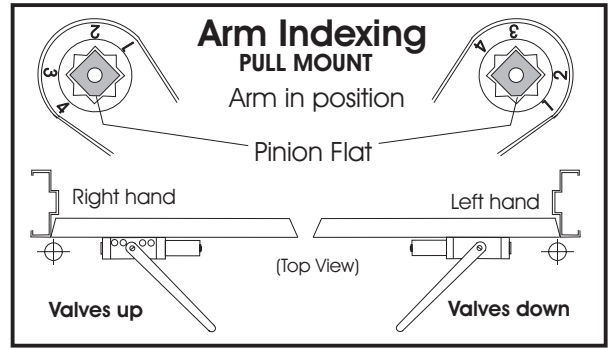
**Door:** Prepare the door for mounting closer. Drill and tap (4) holes for 1/4-20 machine screws, 3/8 diameter sex-nuts, or through bolts and grommet-nuts.

**Note:** If drop plate is used, prepare holes for 7779/7786 drop plate instead of closer. Secure drop plate before mounting closer.

- **Fasten closer to door or drop plate.** Position spring tube away from hinge. See arm indexing illustrations (above right) for valve positioning (up or down). Secure mounting screws.

- **Install arm on closer pinion** see arm indexing illustrations (above right). Position slide arm with counterbore facing up and align with pinion flat as illustrated. Install onto pinion. Secure with washer and flat head torx drive arm screw with thread lock.

- **Track Assembly**  
Remove slider assembly parts from box # 40-7940-0050-000 and insert into channel in the order shown. 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 torx drive mounting screws.

- **Connect arm to track.** Open door approximately 5" (127mm), rotate arm to slider and place end on stud. Push down on arm and tap gently to seat (to prevent stud from turning during assembly). Secure with 1/4-20 x 5/8" long flat head torx drive screw with thread lock.  
CAUTION: Closer arm is under spring tension and may be difficult to rotate.

- **Set door opening 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.

- **Series 7570 & 7770 only:**  
**Fasten cover bracket to closer** with (2) 8-32 x 5/16" round head torx screws. (See illustration page 2 or 4). Bracket must extend underneath and toward spring tube.

- **Install Cover** (see illustration). Fasten cover to closer and cover bracket with (4) 8-32 x 1/4" long round head torx screws.  
For closers with Security Slide Track Arm Only (Series 7560ST & 7760ST) fasten cover with (2) 8-32 x 1/4" round head torx screws at top of closer.

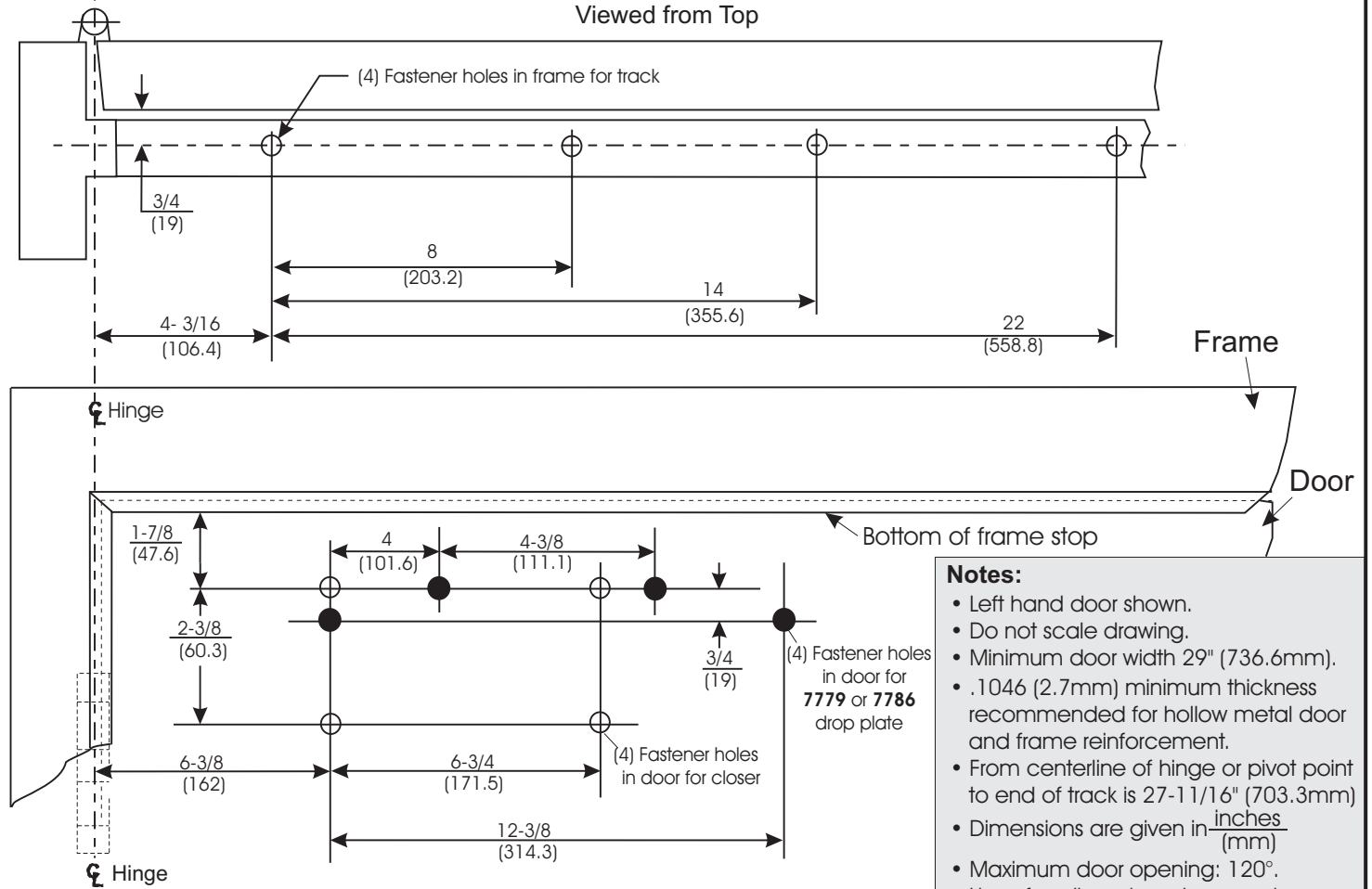
### Preparation for Fasteners

Fasteners	Door or Frame	Drill Sizes
1/4" -20 machine screw	Metal	drill: #7 (.201") tap: 1/4" -20
Sex-nuts and bolts (Optional)	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

# Template

# Push Side Installation

Viewed from Top

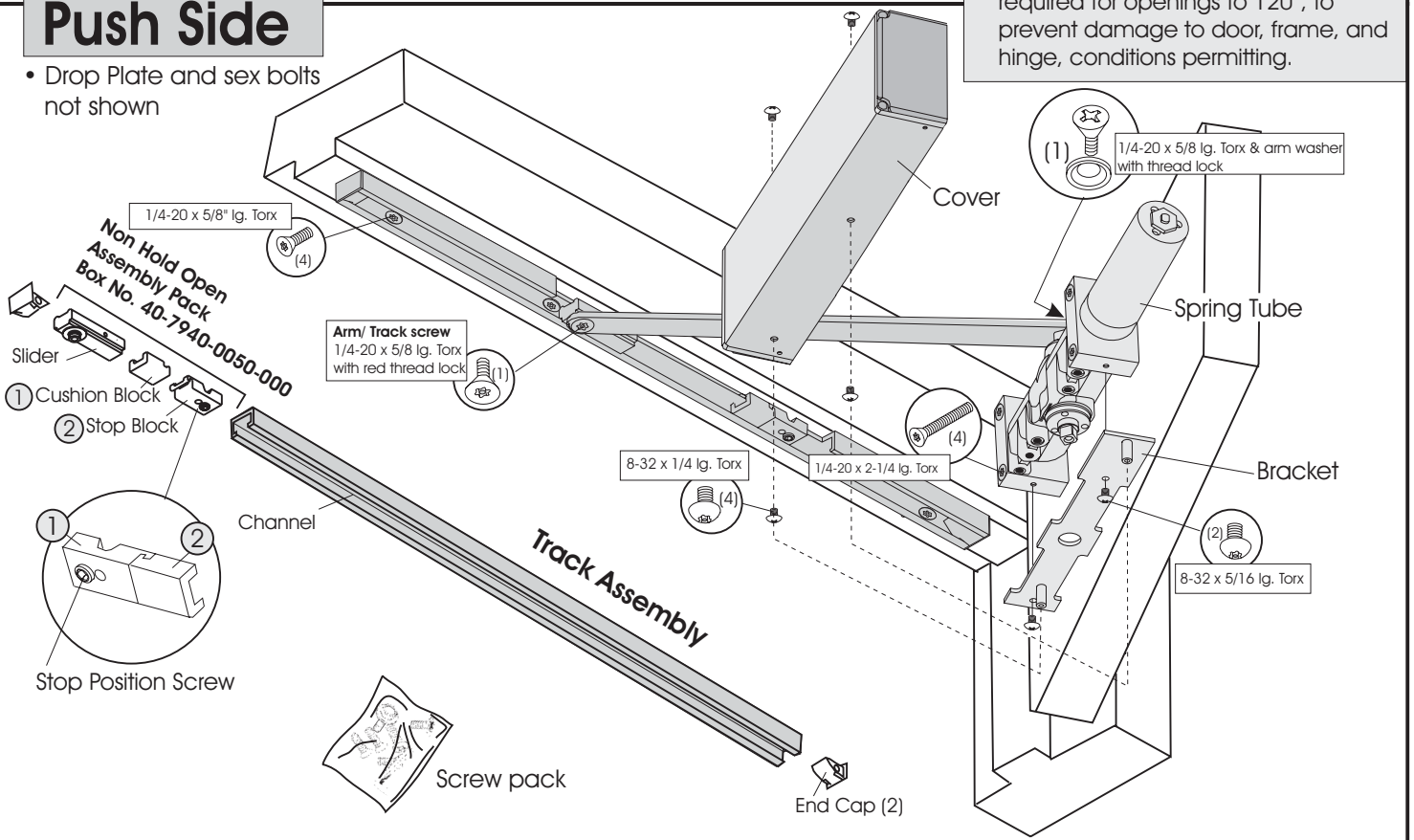


### Notes:

- 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 27-1 1/16" (703.3mm)
- Dimensions are given in inches (mm)
- Maximum door opening: 120°.
- Use of auxiliary door stop may be required for openings to 120°, to prevent damage to door, frame, and hinge, conditions permitting.

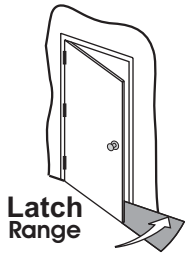
## Push Side

- Drop Plate and sex bolts not shown



# Closer Adjustments

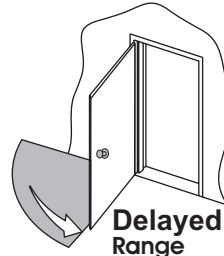
## Hydraulic Controls



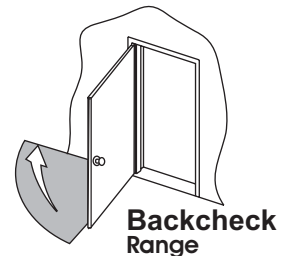
Latch Range



Sweep Range



Delayed Action Range



Backcheck Range

### Closing Power

**7760/7770 Models** come in five different sizes (2 through 6); each power size can be increased by 50%. Adjust as required. See Figure 1.

**7560(BF)/7570(BF) Models** are fully adjustable. For proper sizing see **Power Adjustment Chart**. 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**.

### Range.

Valve "S" (optional) controls door speed in **Sweep Range** for Delayed Action Closer only.

Valve "SD" controls door speed in **Sweep Range** for Standard Closer or **Delay Range**

### Range

for Delayed Action Closer

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**.

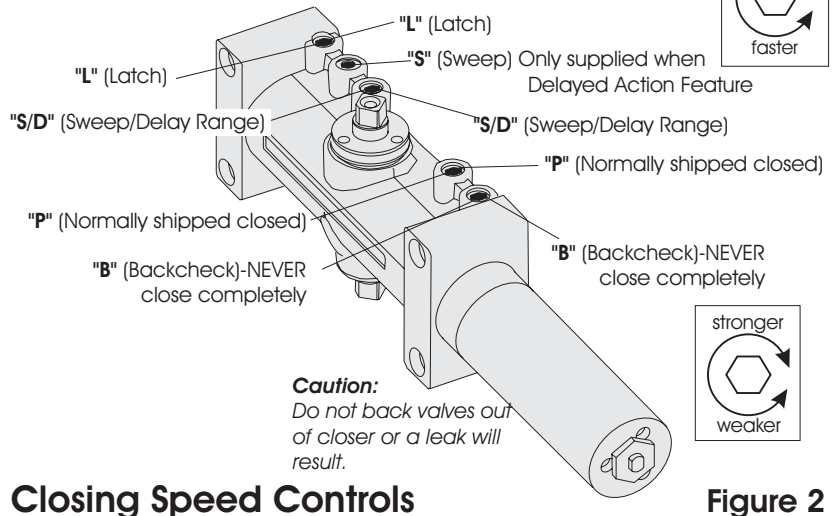
NOTE: Never close this valve completely or damage to closer may occur.

## Power Adjustment Chart

Door Size Inches (mm)	Full Clockwise Turns of Closer Power Adjustment Nut			
	7570ST/ 7560ST PS7570ST/ PS7560ST		7570BF-ST/ 7560BF-ST PS7570BF-ST/ PS7560BF-ST	
	Interior Door	Exterior Door	Interior Door	Exterior Door
28-32 (0.07-0.80)	0	2	1	4
33-36 (0.85-0.90)	2	5	3	6
37-42 (0.95-1.05)	5	8	5	8
43-48 (1.10-1.20)	8	11	8	12

**NOTE:** Maximum of 15 turns (360°) of Power Adjustment Nut. Closer is shipped set at lowest power setting.

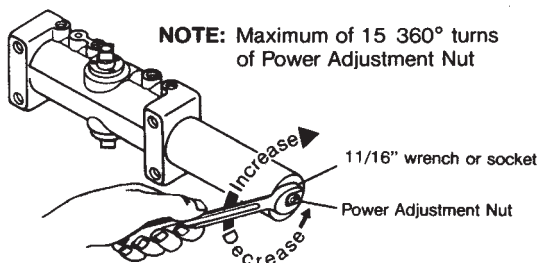
## Standard Closer Only OR Delayed Action Closer Only



## Closing Speed Controls

Figure 2

## Closing Power Control Figure 1



**NOTE:** Maximum of 15 360° turns of Power Adjustment Nut

11/16" wrench or socket  
Power Adjustment Nut

# Norton

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80-9377-0670-020 (06-24)