Installation Instructions

2800ST-2800STH Series
PS2800ST-PS2800STH Series
Slide Track Door Closers

The closing force for Series 2800ST 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 Pages 2 and 3 are recommended where possible, to ensure proper door control.

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.

NOTE: 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.

<table>
<thead>
<tr>
<th>Non Hold Open Models</th>
<th>Hold Open Models *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hinge (Pull) Side</td>
<td>Hinge (Pull) Side</td>
</tr>
<tr>
<td>Stop (Push) Side</td>
<td>Stop (Push) Side</td>
</tr>
<tr>
<td>2800ST</td>
<td>2800STH</td>
</tr>
<tr>
<td>PS2800ST</td>
<td>PS2800STH</td>
</tr>
</tbody>
</table>

* Hold open door closers are not permitted to be installed on fire/smoke barrier doors.

Components:

- Closer Body
- Power Adjustment Shaft
- Full Cover with Insert
- Slide Track Angle Bracket (Optional)
- Included with Stop (Push) Side Mounting - PS2800ST(H)
- Spring Stop
- Close Body Screw Pack
- Hold Open Device (Optional)
- Spline Shaft Screw Pack
- Slide Track Arm
- Slide Track Assembly
- Track Mounting Screw Pack

LH – Left Hand Door
RHR – Right Hand Reverse

Pull Side

Right Hand Door – RH
Left Hand Reverse – LHR

Push Side

RH – Right Hand Door
LHR – Left Hand Reverse

Left Hand Door – LH
Right Hand Reverse – RHR
Installation Sequence:
1. Use template above to locate holes on door and frame:
   a. 4 on door for closer.
   b. 2 on frame face for track assembly.
2. Prepare door and frame for fasteners using chart at right.
   
   **Power Adjust**
   Use 5/8" Socket or Adjustable Wrench for this Adjustment

   **Power Adjustment Chart for 2800ST, 2800STH ONLY**

<table>
<thead>
<tr>
<th>Number of Turns From 0</th>
<th>Size</th>
<th>Approximate Closing Force Measured 30° From Hinge.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1/2</td>
<td>1</td>
<td>2 lbf.</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>3 lbf.</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>5 lbf.</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>8 lbf.</td>
</tr>
<tr>
<td>8</td>
<td>5</td>
<td>11 lbf.</td>
</tr>
<tr>
<td>9</td>
<td>6</td>
<td>14 lbf.</td>
</tr>
</tbody>
</table>

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

3. Fasten closer body to door with power adjustment nut toward lock edge of door.
4. Fasten slide track to frame face with open side facing down and spring buffer and hold open device (if equipped) installed toward hinge edge of door.
5. Secure arm to spline shaft with silver arm screw using 4mm allen wrench provided.
6. With arm parallel to the door, insert spline shaft into top of closer. Spline shaft will contact gear inside closer.

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**Pull Side Application**

- Right hand door shown
- Do not scale drawing
- Dimensions are given in inches (mm)
- Minimum ceiling clearance for unit is 1-3/4" (45mm) from top of door
- Maximum door opening: 140° Max. – Non Hold Open
  140° Max. – Hold Open track
- Note: An auxiliary stop by others is required.

- • Left hand door shown
- • Do not scale drawing
- • Dimensions are given in inches (mm)
- • Minimum ceiling clearance for unit is 1-3/4" (45mm) from top of door
- • Maximum door opening: 140° Max. – Non Hold Open
  140° Max. – Hold Open track
- Note: An auxiliary stop by others is required.

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**Preparation for Fasteners**

<table>
<thead>
<tr>
<th>Fasteners</th>
<th>Door or Frame</th>
<th>Drill-Sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot; Self-Drilling Screw</td>
<td>Closer Body Only</td>
<td>3/16&quot; (4.30 mm) pilot hole required</td>
</tr>
<tr>
<td>#12-14 Self-Drilling</td>
<td>Track Only</td>
<td>3/32&quot; (2.38 mm) pilot hole required</td>
</tr>
<tr>
<td>1/4&quot; - 20 machine screw</td>
<td>Quarter</td>
<td>Drill: #7 (.201&quot; dia.)</td>
</tr>
<tr>
<td>#12-24 machine screw</td>
<td>Track Only</td>
<td>Tap: 1/4&quot; - 20</td>
</tr>
<tr>
<td>Sleeve nuts and bolts</td>
<td>Closer Body Only</td>
<td>Drill: 4.4mm or #16 (.172&quot;)</td>
</tr>
<tr>
<td>Through-bolts and</td>
<td>Closer Body Only</td>
<td>Tap: #12 - 24</td>
</tr>
<tr>
<td>grommet-nuts</td>
<td>All</td>
<td>3/8&quot; (9.5 mm) through</td>
</tr>
</tbody>
</table>

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**Arm Indexing**

6 Cont. Once Spline Shaft and closer gear have made contact, rotate arm approximately 5° (as shown in Arm Indexing chart above) until Spline Shaft slides further thru the closer gear.

7. Move arm in position under slider stud. Insert 5mm hex wrench through threaded hole in the arm and into hex on stud. Rotate counter-clockwise until tightened. (See Figure 1 on Page 4)

8. 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 with provided black screw.

9. Adjust closer, spring stop and hold open device (if equipped). (See Page 4)
1. Use template above to locate holes on door and frame:
   4 on door for closer.
   3 on frame soffit for track drop angle bracket.

2. Prepare door and frame for fasteners using chart on Page 2.

3. Secure arm to spline shaft with silver arm screw using 4mm allen wrench provided.

   - Left hand door shown
   - Do not scale drawing
   - Dimensions are given in inches (mm)
   - Maximum door opening:
     110° Max. – Non Hold Open
     110° Max. – Hold Open track
   Note: An auxiliary stop by others is required.

Installation Sequence:

1. Use template above to locate holes on door and frame:
   - 4 on door for closer.
   - 3 on frame soffit for track drop angle bracket.

2. Prepare door and frame for fasteners using chart on Page 2.

3. Secure arm to spline shaft with silver arm screw using 4mm allen wrench provided.


5. With arm parallel to the door, insert spline shaft into top of closer. Spline shaft will contact gear inside closer. Once Spline Shaft and closer gear have made contact, rotate arm approximately 5° toward door (as shown in Arm Indexing chart above) until Spline Shaft slides further thru the closer gear.

6. Rotate arm as shown above and fasten closer body to door with power adjustment nut toward lock edge of door.

7. Fasten slide track drop angle bracket to door frame as shown above. Attach track to track drop angle bracket with open side facing down and spring buffer and hold open device installed toward hinge edge of door using black screws provided with drop angle bracket.

8. Move arm in position under slider stud. Insert 5mm hex wrench through threaded hole in the arm and into hex on stud. Rotate counter-clockwise until tightened.
   (See Figure 1 on Page 4.)

9. 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 with provided black screw.

10. Adjust closer. (See Page 4)
Adjustment Instructions

Arm Attachment to Track Slider

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

1. Closing Power
2800ST/PS2800ST Models are fully adjustable. For proper sizing see chart on Page 2 or 3. To adjust closer power – See Figure 2. Increase or decrease power as necessary.

2. Closing Cycle (hydraulic control) See Figure 3A.
   Valve "L" controls door speed in Latch range.
   Valve "C" controls door speed in Sweep range.
   Use 4mm hex-key furnished & adjust as shown in Figure 4.

3. Opening Cycle (hydraulic control) See Figure 3B.
   Valve cushions (slows) door opening in the back-check range.
   Note: Never close this valve completely or damage to closer may occur.
   Use 4mm hex-key furnished & adjust as shown in Figure 5.

4. Installation of Cover:
   Architectural plastic cover: Slide cover over the closer and snap on.

Spring Cushion Opening Angle Adjustment:
The opening angle may be adjusted from 80 to 110 degrees by positioning the spring cushion assembly in the track. Refer to instructions included in the spring cushion package labeled “DC153”. Note: Spring stop must be installed on every installation.

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. Additionally, the hold open position may be adjusted from 80 to 110 degrees. Refer to instructions included in the hold open package labeled “DC152”. Note: Install spring cushion stop toward hinge then install hold open device. See Fig. 6 on this page.

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