Installation Instructions
80-9380-2213-020 (06-09)

8000ST Series
Slide Track Door Closers

The closing force for Series 8000ST 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 4 are recommended where possible, to ensure proper door control.

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.

- For closers with or without **Delayed Action** closing suffix “DA”.
- 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>8300ST</td>
<td>8300ST-H</td>
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<tr>
<td>8301ST</td>
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</tbody>
</table>

**Components:**
- 8500STM Full Cover with Insert
- 8300ST Narrow Cover w/ Pinion Cap
- 8200P
- 1639
- 8400M
- 8400A
- 8400M

**Hold Open Models Only**
Screw to Engage/Disengage Hold Open 1/4 Turn

**Stop (Push) Side Slide Track**

**Hinge (Pull) Side Slide Track**

**Power Adjustment Shaft**

- *8500STMA Optional Architectural Metal Cover
- *8500STA Optional Architectural Plastic Full Cover w/ Insert

*Not available for PUSH SIDE, PS prefixed applications.*
Pull Side Application

**IMPORTANT:**
From centerline of pivot point to end of track is 26-1/2" (673mm)

- Right hand door shown
- Do not scale drawing
- Dimensions are given in inches (mm)
- Minimum ceiling clearance for unit is 2" (50mm)
- Maximum door opening:
  - 110° – Non Hold Open with spring buffer in track
  - 180° – Non Hold Open without spring buffer
  - Auxiliary door stop required

**110° – Hold Open track**

- Use template to locate holes on door and frame:
  - 4 on door for closer.
  - 3 on frame face for track assembly.

- Prepare door and frame for fasteners using chart on this page.

- FOR 8301/8501 & 8311/8511 SERIES MODELS ONLY set closer power for door size using chart below:

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**Power Adjust**
Use 5/16" Socket or Adjustable Wrench for this Adjustment

**Power Adjustment Chart for 8301/8501, 8311/8511 ONLY**

<table>
<thead>
<tr>
<th>DOOR</th>
<th>32&quot; (0.85M)</th>
<th>36&quot; (0.90M)</th>
<th>42&quot; (1.00M)</th>
<th>48&quot; (1.20M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interior Door</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Exterior Door</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>9</td>
</tr>
</tbody>
</table>

**NOTE:** Maximum of 20 turns (360°) of Power Adjustment Shaft. Closer is shipped set at 10 turns.

- Fasten closer body to door with power adjustment shaft toward lock edge of door. Note: If application has a full metal cover, 8500M, slide mounting clips under each end of closer before tightening screws.

- Fasten slide track to frame face with open side facing down and spring buffer end toward hinge edge of door.

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**Arm Indexing**

**Preparation for Fasteners**

<table>
<thead>
<tr>
<th>Fasteners</th>
<th>Door or Frame</th>
<th>Drill-Sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Drilling Screw</td>
<td>Aluminum or Metal</td>
<td>No drill required</td>
</tr>
<tr>
<td>Wood</td>
<td>3/16&quot; (4.30 mm)</td>
<td></td>
</tr>
</tbody>
</table>
| 1/4" - 20 machine screw| Metal         | Drill: #7 (0.201" dia.)
|                        | Taps: 1/4" - 20 |
| Sleeve nuts and bolts  | Hollow Metal  | 3/8" (9.5 mm) door face opposite to closer |
| Through-bolts and grommet-nuts | Aluminum or Wood | 3/8" (9.5 mm) through |

- Adjust arm to shortest length and install 9/64" hex drive socket head screw from screw pack.

- Place slide arm on pinion shaft using Arm Indexing instructions above.

- Secure arm with arm washer and arm screw.

- Insert arm stud into slide block in track assembly. Secure by pushing in on the retainer clip that extends from the slide block in the track, until it is flush with the slide block.

- Adjust closer See Page 4.
• Adjust arm to shortest length and install 9/64” hex drive socket head screw from screw pack.

• Place slide arm on pinion shaft using Arm Indexing instructions above.

• Secure arm with arm washer and arm screw.

• Insert arm stud into slide block in track assembly. Secure by pushing in on the retainer clip that extends from the slide block in the track, until it is flush with the slide block.

• Adjust closer See Page 4.
Adjustment Instructions

Arm Attachment to Track
Insert arm stud into slide block in track. Secure by pushing in on the retainer clip that extends from the slide block, until it is flush with the slide block. See Figure 1.

Door Opening Angle and/or Hold Open Angle:
Remove 9/64" hex drive socket head screw from arm. Open door to desired angle and install hex-drive socket head screw into hole in adjusting rod that is aligned with the hole in the adjusting tube.

Closing Power
• 8300ST/8500ST Models come in five different sizes (2 thru 6); each power size can be increased by 50%. Adjust as required, See Figure 2.
• 8301ST/8501ST 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.

Closing Cycle (hydraulic control) See Figure 3A.
Valve "L" controls door speed in Latch range.
Valve "S" controls door speed in Sweep range.
Valve “D”–Optional–controls door speed in the Delay range. Use 1/8" hex-key furnished and adjust as shown in Figure 4.

Opening Cycle (hydraulic control) See Figure 3B.
Valve cushions (slows) door opening in the backcheck range.
Note: Never close this valve completely or damage to closer may occur.
Use 1/8" hex-key furnished and adjust as shown in Figure 5.

Installation of 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.
• Architectural plastic cover: Slide cover insert into the un-used cutout in cover. Install standoffs in ends of closer. Snap cover onto standoffs.

On/Off Hold Open Feature:
Slotted screw, accessible thru hole in face of track, engages or disengages the hold open feature with 1/4 turn of the screw. See Page 1 for location of screw.

Hold Open Power Adjustment:
If more hold open power is required, the power may be increased by turning the adjustment shaft in the end of the track nearest the hinges. Use 9/64" hex wrench provided and rotate adjustment shaft clockwise to increase holding power.