**IMPORTANT:**
- An improperly installed or incorrectly adjusted door closer may cause **property damage** or **personal injury**; and will void product warranty.
- To avoid personal injury, **DO NOT DISASSEMBLE THIS DOOR CLOSER BODY.**
- Door closers must be securely fastened to a properly reinforced door and frame with fasteners provided.

**BEFORE INSTALLING:**
- The Americans with Disabilities Act (ADA) requires that doors having door closers have an opening force not to exceed 5 lbf.
- Use standard templating for regular arm and parallel arm applications. Jamb mounted applications use the template for 140° door opening to achieve the required opening force.
- The door closer’s power size adjustment feature may require adjustment to its lowest setting to comply with ADA opening force guidelines.
- ADA compliant closers are: 9500.

---

<table>
<thead>
<tr>
<th>Size of Door &amp; Door Closer</th>
<th>Type of Installation</th>
<th>Recommended Closer Size</th>
<th><strong>Max. Opening Force lbs/ft</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Interior In-swinging</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular Arm</td>
<td>2'4&quot;</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>3'0&quot;</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>3'6&quot;</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>4'0&quot;</td>
<td>4</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>4'6&quot;</td>
<td>5</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>5'0&quot;</td>
<td>6</td>
<td>26</td>
</tr>
</tbody>
</table>

**NOTE:** These forces are for standard templating with bearing type hinges and do not account for pressure differentials and draft.
Components:

Figure 1

- Closer Mounting Bracket
- Heavy Duty Arm
- Plastic Cover (Standard)
- Screw Pack

Closer
<table>
<thead>
<tr>
<th>Fasteners</th>
<th>Door or Frame</th>
<th>Drill-Sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#12-14 Self-Drilling Screw</td>
<td>Aluminum or Metal</td>
<td>No drill required</td>
</tr>
<tr>
<td>1/4&quot; - 20 machine screw</td>
<td>Wood (see Note)</td>
<td>3/16&quot; (4.30 mm)</td>
</tr>
<tr>
<td>Optional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sleeve nuts and bolts 1-9/32&quot; (33) = 1-3/8&quot; (35) Door Thk. 1-21/32 (42) = 1-3/4&quot; (44) &amp; Over Dr. Thk.</td>
<td>Hollow Metal</td>
<td>9/32&quot; (7 mm) through; 3/8&quot; (9.5 mm) door face opposite to closer</td>
</tr>
<tr>
<td>Through-bolts and grommet-nuts</td>
<td>Aluminum or Wood</td>
<td>3/8&quot; (9.5 mm) through</td>
</tr>
</tbody>
</table>

Note: Wood doors/frames: drill 1/8" (3.2) pilot hole when using Self-Drilling Screws.

Always consult door/frame manufacturer for fastener compatibility with the material of their door/frame.

- It is recommended that the door, on which the door closer will be installed, be hung on ball bearing hinges. Door must swing freely.
- A separate door stop, supplied by others, is recommended to prevent damage to the door closer, closer arm; or to the door, frame or adjacent walls.
- Door and Frame must be properly reinforced, or use of special fasteners employed, to prevent the mounting screws from pulling out.
- All dimensions are given in inches with corresponding metric dimensions (millimeters) in parentheses.
HD Regular Arm Template

To obtain extra closing force add 3" (77) to dimensions marked. This will limit degree of door opening to 130°.

NOTES:
• Check hand of door, see page 2.
• Right Hand Application Shown. Left Hand Opposite.
• Dimensions given in inches (mm). Do Not Scale Drawing.
• Closer must be mounted level to ensure proper closer performance.
• Door opening (up to 180°) is dependent upon door, frame, wall and hinge/pivot conditions permitting.
• Maximum Hinge Side Reveal 1/8" (3).
HD Regular Arm Installation Sequence

- Select angle of opening and use dimensions shown in template to locate 4 holes (+) on door for Closer Mounting Bracket (or 4 holes ▼ for optional drop plate) and 2 holes on jamb for arm bracket. For applications that are different from above, a separate template will be supplied for door and frame preparation.

- Prepare door and frame for fasteners using "Preparation for Fasteners" chart, Figure 2, Page 4.

- Fasten Closer Mounting Bracket to door. Fasten optional drop plate to door, only if it is required for the door conditions.

- Install closer body with tube end away from hinge, with valves: Down for Left Hand door / UP for Right Hand door.

- Position arm on closer. Main arm projects straight out at 90° angle to door. Install and tighten 5/16 Hex Head Arm Screw & Washer assembly.

- Preload and fasten arm to frame. Close door, swing arms so that they form a "V" position. Align holes in arm bracket with pre-drilled holes on frame and install attaching screw.

- Make closer adjustments using information on page 7, then install closer cover.
Springs Power Adjustment
Locate spring power adjuster from Illustration below
Size 1 thru 6 Adjustment See Chart

**SPRING POWER ADJUSTMENT CHART**

- All 9500 closers are factory set at an approximate Size 3.
- Adjust closer as necessary for door size using this chart.
- Readjustment may be required to suit prevailing conditions.

<table>
<thead>
<tr>
<th>Size of Door</th>
<th>Spring Power Adjustment No. Full Turns Clockwise</th>
<th>Equivalent Closer Size (Approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interior</td>
<td>Exterior In Swing</td>
<td>Exterior Out Swing</td>
</tr>
<tr>
<td>2' 4&quot; (712)</td>
<td>2' 6&quot; (764)</td>
<td>1-5</td>
</tr>
<tr>
<td>2' 6&quot; (764)</td>
<td>3' 0&quot; (915)</td>
<td>5-8</td>
</tr>
<tr>
<td>3' 0&quot; (915)</td>
<td>3' 6&quot; (1067)</td>
<td>8-13</td>
</tr>
<tr>
<td>3' 6&quot; (1067)</td>
<td>4' 0&quot; (1219)</td>
<td>13-15</td>
</tr>
</tbody>
</table>

**Closing Speed Valve** (1/8 Allen Wrench Provided)
Factory preset for typical doors.
To adjust speed of door closing from fully open to a position 2" to 5" from closed, turn Closing Speed Valve CLOCKWISE to SLOW closing, COUNTER-CLOCKWISE to SPEED closing.

**Latching Speed Valve** (1/8 Allen Wrench Provided)
Factory preset for typical doors.
After closing speed has been obtained, turn latching speed valve CLOCKWISE to SLOW latching or COUNTER-CLOCKWISE to SPEED latching for last 2" to 5" of door travel.

**Delayed Action Valve** (1/8 Allen Wrench Provided)
Factory preset for typical doors.
Turn valve CLOCKWISE to SLOW closing, COUNTER-CLOCKWISE to SPEED closing. Delayed action may be adjusted from 20 seconds to 90 seconds, depending on degree of door swing. Delay occurs at the beginning of the door closing cycle from fully open down to 70°, where the closing speed valve then begins its control.

**Backcheck Intensity Valve**
Factory preset for typical doors.
Turn valve COUNTER-CLOCKWISE to reduce backcheck or CLOCKWISE to increase backcheck. (Backcheck should be set to give a soft cushioning action, not a sudden stop.)
Installing Cover

- Slip cover over closer.
- Hold tightly against Closer Mounting Bracket surface.
- Secure on each side with 6-32 x 1/4" screws.

Insert is removable.
Place in unused opening.

Plastic Cover
(Standard)